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PART FIRST.
Original Communications.

ART. I.—*Hygeology and its Relations to Vital Statistics.* By the late SAMUEL FORRY, M. D.*.

As the exposition of the laws of population, determined by that branch of statistics termed *Vital*, is the leading design of this treatise, it would seem accordant with a judicious arrangement of the subject to prepare the reader, in the first place, by laying before him a condensed view of Public Hygiène or State Medicine. To him who has made the subject either of political economy or of the philosophy of health his study, the inseparable relation of Vital Statistics and State Medicine—the modification in the former induced by the latter—is sufficiently obvious. Fortunately, the study of the human frame in its healthy relations, that is, anatomy and physiology, has, of late years, become a branch of general learning; and hence the public mind is correspondently prepared for a more just appreciation of the vital laws to be developed in the following pages. Nor will the facts thus presented fail to find interest in the breast of every individual, in proportion as the preservation of health, the enjoyment of happiness, and the attainment of longevity, are objects of human desire.

All our results will clearly lead to the irresistible conclusion, that if

* The late lamented Editor of this Journal, Dr. S. FORRY, left an elaborate work in manuscript behind him, entitled "VITAL STATISTICS.—*The Development of Man's Faculties, and the Laws of his Mortality and Reproduction, viewed in their relations to Hygiology or State Medicine.*"

The work having been entrusted to our care to edit and bring before the public, we submitted it to the examination of the Hon. Albert Gallatin, who expresses a very high opinion of its merits, and strongly advises its publication. We have, however, endeavored in vain to find a publisher who was willing to assume the expense of bringing it out; there therefore remains no other way but to publish it by subscription, which, at no distant period, we design to undertake. In the meantime, we present our readers, as a sample of the work, a portion of the first chapter, which will give a tolerably correct idea of the whole.—ED. JOUR.

in God's government of the affairs of men, there is one truth more plainly written than another, it is, that in proportion as civil liberty and virtue prevail, in proportion as the laws are just, securing the greatest good of the greatest number, and the people are industrious and enlightened, will man be exempt from disease, his life be longer, and his happiness greater. At the same time will the higher mortality of the lower classes in all countries be brought to view; and in teaching the poor man how to be healthy, he will, to the same extent, be taught how to be virtuous, prosperous, and contented. Hence, in the execution of this design, the aims of the Christian and the patriot will be promoted.

The study of medicine, as now cultivated, is the study of human nature. It is not limited to isolated man—to man as an individual; but, impelled by more noble aspirations, it spreads the wings of its solicitude over all society—over man regarded as a people. It is the concentration of moral, intellectual and physical science, upon the moral, intellectual and physical advancement of the human family: and, as the medical profession now, for the first time in the history of man, stands unshackled either by the monarch or the priest, and devoted solely to the best interests of humanity, it behooves them to place themselves collectively in the same relations to society, as individually they now stand toward their patients. Modern civilization has not a few gordion knots; and to untie these, the application of medicine as a science, as it is at this time illustrated in the Registration of England, is of surpassing importance. Indeed, there are no questions concerning humanity, ay, some of the most profound political questions of modern times, which the study of medicine may not assist to solve. What a noble theme is thus presented for investigation!—a theme whose subject is population, and whose end is public health!

CHAPTER I.

THE NATURE AND OBJECT OF HYGIOLOGY.

State Medicine, Medical Police, Public Hygiène, and Hygiology, the last two being derived from ὑγιεια, health, with the addition of λογος, a discourse, to the latter, are terms employed synonymously to express both the science and the art; the object of which is, to determine the influence of all physical and moral agents upon healthy man, and thus to apply the principles of medicine to the securement of the well-being and the amelioration of the condition of society. The term Hygiology, which is now coming into general use, is a very appropriate one, and so is that also of State Medicine, as used by the Germans, which includes the department known under the names of Legal or Forensic Medicine, or Medical Jurisprudence. By these last terms is understood the application of medical knowledge to the elucidation of doubtful questions in courts of justice; but by some authors, this last is so extended as to comprehend all the foregoing, that is, all medical knowledge that may prove useful to the legislature or the magistracy.

The object of the science of medicine, it may be further remarked, is not alone the cure of diseases: but it has, as will be seen, the most intimate relations with the social organization. As its aid is not unfrequently invoked in the enactment of laws, in enlightening the

magistrate in their application, and in maintaining the public health, its application thus has been designated *public hygiène and legal medicine.* Hence, hygiology embraces in its province all that relates to boards of health, to epidemics, endemics, epizootiæ, vaccination, quarantine, hospitals, lunatic asylums, the relief of the sick poor, sewerage and drainage, the supply of water to towns, the health of prisons and of emigrant ships, and the inspection of factories; which last is a terrible evil, from which the United States is fortunately wholly exempt. These subjects are here enumerated as the ordinary objects of legislative action in England, France, Germany, etc., and also to some extent in our own country; but it is only as medical science became more cultivated in quite recent times, that there has been any system in these hygiènic enactments. There are, however, many other similar philanthropic objects. We find, for example, that the insalubrity of certain arts and trades has been materially diminished by such inquiries; and as, taking the whole result of these investigations, the mean duration of life among the laboring classes has been by this means augmented, which is, in other words, diminishing crime and emptying prisons, it follows, that the morals of this class are at the same time improved and their comforts increased.

Nor is legal medicine, in view of the grave importance of the questions pertaining to its domain, of less consequence than public hygiène. Based upon the principles of medical science and its collateral departments, the physician is often called upon to decide such questions, as the degree of development of the fœtus and its viability—the nature of wounds, their cause, and their necessary and probable result—the identity of individuals, mental alienation and its attending actions, poisoning, death and its verifications, the period of its occurrence, and its certain or presumable causes; and hence, upon his conclusions will consequently depend the liberty, the honor, the fortune, the life of a fellow being. But medical police is too apt to be regarded by the mass as nothing more than the mere removal of an ostensible nuisance—the burying of a dead horse, or the filling up of an offensive puddle; or at most, as the doings of Boards of Health, heard of when cholera or the yellow fever prevails, whether in reality or imagination, and which many consider to be merely fear-spreading contrivances. It is in Germany and France alone, but more especially in the former, that hygiology is cultivated as a science. England has just begun the cultivation of state medicine; while in this country it can scarcely be said, notwithstanding its immediate relation to the preservation of the health of the whole community, to be recognised as a study.

The site and erection of gas-works and of slaughter-houses, it is true, often become the subject of litigation; but as the medical witnesses themselves generally come to the examination of the question unprepared, the jury are only puzzled by the contradictory medical testimony, and thus the verdict, as regards the question of the depreciation of property, is a mere matter of chance. The loose manner in which medical men, called before courts of justice, express themselves, is actually, however ungracious it may seem to make the declaration, a disgrace to the profession. It may happen that certain artisans of a particular class may die in rapid succession; but as workmen are never wanting, who cares to undertake the trouble of instituting an inquiry into the cause of the unwholesomeness perhaps

of a manufactory? As regards food and drink, they may be supplied for years of a very bad quality to a city, with perfect impunity, save to the consumer; and thus too crowded and unventilated courts may arise in the very heart of our largest towns, endemics and epidemics may appear and disappear, while the lessons which they teach are never treasured up for the public benefit. Although it is well known that wherever want and misery abound, there sickness and early death, with every indication of physical and moral degeneration, necessarily exist; yet large portions of the most intelligent part of the community are needlessly exposed to removable physical conditions, which tend not only to render life wretched and inefficient, but to diminish its duration. Indeed, it is the nature of man to give little heed to remote and contingent danger; but when it comes near—when pestilence knocks at the door—then it is that precautionary measures are adopted, in fear and in haste, to ward off the threatened invasion. It is on these occasions that the most deplorable ignorance is evinced by the great mass of the community; and even those who should be the expounders of the laws of epidemics, are apt to give forth opinions that are less calculated to inspire confidence than to excite alarm. More oracular than wise, some physicians, on the supposed appearance of yellow fever, for example, in our own city, raise the cry of contagion, which, as it necessarily creates a panic, is of itself a most efficient cause of disease.

The city of Paris, for the last forty-five years, has enjoyed the advantage of a council of health, *conseil de salubritè*, which at first consisted of but four members, and subsequently of seven. The duty of these members at its early establishment, was limited to an examination of adulterated liquors, of unwholesome manufactories and workshops, and of epizootic diseases, or those which are epidemic among animals; and subsequently, the direction of public charities and the visiting of prisons fell to their duty. When the number was increased to seven, the sphere of their labors was still further extended. It now embraced the inspection of markets, cemeteries, dissecting rooms, slaughter-houses, privies, public baths, drains, pits, collections of manure and filth, etc. The treatment of epidemics was now also confided to them; and it was required of them likewise, to attend to the tables of mortality, and all other medical statistics; to take measures to repress quackery; to institute inquiries with the view to render workshops and public places wholesome, to determine the best methods of warming and lighting, etc., etc. These multiplied duties were attended to with so much zeal, that, in the course of fifteen years, the number of reports made was not less than 4,330.

It was correctly remarked by M. Parent-Duchatelet, who was the prince of hygiènists, that a sufficient preparation for the duties of a member of this board is not afforded by an ordinary medical education. They demand a knowledge of general physics, which is seldom possessed by the medical practitioner, and a practical acquaintance with the precise effects of trades and professions, and also of manufactories, on the health of those engaged in them, and on the health of the masses collected in cities, as well as on animals. Thus an acquaintance with the greater number of the particular processes of each trade, becomes necessary. Even a knowledge of the geology of the locality and of the physical character and constitution of the soil, is required.

Parent-Duchatelet was a man thus accomplished; and it is to be feared that it is only in countries having councils or commissions supported by government, that public hygiène will be thus made a special study. Renouncing the practice of medicine, in which he had fair hopes of a bright success, M. Duchatelet devoted the last fifteen years of his life to the prosecution of public hygiène in Paris—a calling which, though dangerous, repulsive, and even disgusting, proved of the first importance to the health of that city. He traversed and examined almost every sewer in Paris, and visited its most infected spots of impurity and filth. In his own words: "J'ai surmonté sans hesiter la repugnance et les dangers inseparable de pareilles recherches; j'y ai sacrifié mon temps, et mon argent, et ma peine; je ne puis dire les demarches que j'ai faites, les fatigues que j'ai eprouvées, et les contrarieté de tout espece qu'il m'a fallee endurer." M. Duchatelet was thus a public benefactor, and perhaps the only man that ever devoted his life to public hygiène, upon which he published thirty memoirs and reports. He died at the early age of forty-five, when he left completely finished his greatest work on public hygiène—*De la Prostitution dans la ville de Paris*—which cost him more than eight years of incessant study—a monument of the extraordinary industry of its author.

In Great Britain, hygiène has not usually formed part, as a distinct branch, of the curriculum of medical studies; and as our literature is, in a great measure, derived from England, little attention has been paid to it in this country, save the detached notices which it receives from the different practical chairs. Formerly, in the University of Maryland, when Prof. Dunglison, who has written on this subject, was attached to that institution, it was part of the duties assigned to his chair. On the continent of Europe, however, public and private hygiène, as a distinct chair, has been long taught, the former being understood as already defined, and the latter as comprising only that which relates to man individually. But the value and importance of studies of this kind early attracted the notice of our distinguished countryman, Dr. Rush, who, in an introductory lecture, in 1810, in the University of Pennsylvania, spoke in the following eloquent and impressive language: "To animate you to apply to the study of all the subjects enumerated in the introduction to our lecture, I beg you to recollect the extent of the services you will thereby be enabled to render to individuals and the public: fraud and violence may be detected and punished; unmerited infamy and death may be prevented; the widow and the orphan may be saved from ruin; virgin purity and innocence may be vindicated; conjugal harmony and happiness may be restored; unjust and oppressive demands upon the services of your fellow citizens may be obviated; and the sources of public misery in epidemic diseases may be removed, by your testimony in courts of justice."

From a neglect of the conditions appointed by Divine Wisdom, as requisite for the protection of man from disease, millions perish annually, while millions more are in a state of unceasing suffering. "The annual slaughter in England and Wales from *preventible* causes of typhus which attacks persons in the vigor of life, appears to be double the amount of what was suffered by the allied armies in the battle of Waterloo. It will be shown that diseases such as those which now prevail on land, did, within the experience of persons still living, for-

merly prevail to a greater extent at sea, and have since been prevented by sanitary regulations; and that when they did so prevail in ships of war, the deaths from them were more than double in amount of the deaths in battle.* For the future development of its frame, the infant, from the moment of birth, is almost wholly dependent upon external circumstances; and although this general law will be fully illustrated in the sequel, yet the fact may be here referred to, that in the work-houses of London, about a century ago, the astounding result of 23 deaths in every 24 infants under one year of age, was presented; but this proportion of mortality was speedily reduced from 2600 to 450 in a year, upon the adoption of an improved system of management. At the present day, at Manchester, England, ten out of every seventeen die before the age of five years is attained. In our own Atlantic cities, as will be seen, infant mortality is also fearfully great. According to Dr. A. Combe, one infant in every ten, at the present time, perishes within a month of its birth. The mortality from consumption, according to the Registrar-General of England, is greater among women than men. "The higher mortality of English women by consumption," says Mr. Farr, in his letter to the Registrar-General, p. 73, 1841, "may be ascribed partly to the in-door life which they lead, and partly to the compression, preventing the expansion of the chest, by costume. In both ways they are deprived of free draughts of vital air, and the altered blood deposits tuberculous matter with a fatal, unnatural facility. *Thirty-one thousand and ninety* English women died in one year, of this incurable malady. . . . . Will not this impressive fact induce persons of rank and influence to set their countrymen right in the article of dress, and lead them to abandon a practice which disfigures the body, strangles the chest, produces nervous or other disorders, and has an unquestionable tendency to implant an incurable hectic malady in the frame? Girls have no more need of artificial bones and bandages than boys."

On the other hand, the daughters of the poorer classes, when as dress-makers they are confined all day and part of the night in crowded and ill-ventilated apartments, are deprived of that vital air and bodily exercise which are essential to a healthy state of the human frame. "It is not doubted," says Mr. Chadwick, "by medical witnesses, that one third at least of the healthful duration of human life amongst milliners, dress-makers, and tailors, will be found to be destroyed by ignorance of the want of ventilation."

Against the preposterous custom of tight-lacing, whether in the shape of the old stays or the modern corset, medical men have never ceased to remonstrate. The compression of the chest and abdomen of females is at this day far too general; so much so, indeed, that the ribs of the majority of our modern belles are deformed by tight-lacing. Now the general form of a well-made female, unlike the figure of the male, which has the greatest breadth across the shoulders, represents two cones, united by their bases about the hips—a difference of general form that finds a happy illustration in the contrast of the Venus de Medici and the Apollo Bel-

* Report on the Sanitary Condition of the Laboring Population of Great Britain. By Edwin Chadwick, Esq., Barrister at Law, and Secretary to Board of Poor Law Commissioners. London, 1842.

videre. As the widest part of this ancient unsophisticated female chest is at its lowest part, while that of the modern beauty, in which whalebone and tight-lacing have done their worst, is changed into an inverted cone, it is easy to understand that this diminution of the cavity of the thorax induces consumptive diseases. At the same time, as the stomach, liver, and other abdominal viscera are excessively depressed, not only is the function of digestion impaired, but the perils of maternity are vastly augmented. And here we cannot pass by the additional causes, to which, in the higher classes, the health of girls is too often sacrificed—those "eternal" accomplishments, which, with small benefit to the intellect, inevitably dwarf the moral and physical attributes. "Few are acquainted," says the distinguished Dr. James Johnson, "or capable of becoming acquainted, with the baneful consequences of this system; but many are doomed to feel them. The poisoned arrow, in this case, leaves no wound; but the venom meanders slowly through the veins, and effects its destructive work unseen and unknown! What but evil can be expected from a system of education which enervates the mind and enfeebles the body—which polishes the external *senses*, and leaves the intellect a prey to rust and moth—which excites the imagination and obtunds the judgment—which, to speak out plainly, fosters mere *animal feeling* and discourages *moral sense?*"

Less prolonged study, at least fewer hours to music, and more to properly adapted bodily exercise, would send young ladies forth to the world, at once better instructed and more healthful, and thus much better qualified to perform the high and sacred duties of their natural destiny.

It is not, however, our intention to dilate upon the highly important subject of physical education, notwithstanding it is a theme that has the closest relations with man's hygiènic condition; but it will not be without advantage to advert to those general principles by which may be insured that greatest of earthly blessings, *a sound mind in a sound body.* Between man and the external world, there exist certain definite and immutable relations; and so obligatory is the observance of these laws, that their infringement is invariably followed by the terrible penalties of disease and death. These natural laws by which man is connected with external objects, have been appropriately classed under the three heads of the physical, the organic, and the moral. The laws of matter and motion, it is true, are somewhat modified by vitality; but the human body never ceases to be under the influence of physical laws. By organic laws are meant such as are peculiar to organization, with which life is always found connected. Man is also a moral and intellectual being; and although these higher powers pertain to his spiritual nature, yet are they dependent on organized structure for their manifestation. So intimate is the connection among these several functions, that they are mutually influenced by each other's derangement. If bodily health becomes impaired, the mental powers, which are manifested only through organized structure, also languish; while the moral feelings are sure to be acted on unfavorably, by that irritability of mind, to which ill health is prone to give rise.

As it is by the processes of digestion and respiration that the animal body obtains the elements of subsistence, it is thus more immediately connected with external nature; and as food and air are indispensable to the maintenance of life, it is obvious that the health of the body must

depend materially upon the quantity and quality of both supplied. Next in importance to the two essential supports of life, food and air, as a means of maintaining health and vigor, is exercise; but reference is here made not alone to locomotion, but to all the functions which minister to human existence.

Now, if it comported with our plan to pursue the subject of physical education in detail, we should divide the period of life to which it more especially applies, into the consecutive stages of Infancy, Childhood, Adolescence, and Puberty; and in connection with each stage, we should consider in successive order the question of food, air, clothing, cleanliness, exercise, and moral management.

As an example of the improvement in the management of infants in modern times, it is sufficient to refer to the entire abolishment of the use of the swaddling-band, as was for ages the universal practice, by which the limbs and head of the infant were deprived of all free motion. As, in the young throughout the animal kingdom, there is an instinctive impulse to almost constant exercise, it may with reason be concluded that the free use of its motive powers gives a pleasurable sensation to the infant, while their restriction is productive of pain. The extinguishment of this prejudice was certainly a great improvement, both physical and moral. As the restraints imposed on the infant's free motions will often excite an irritable temper, and as especially those powers which tend to excess, acquire force by exercise, the moral laws, even at this early period of life, are not to be disregarded. It is in infancy particularly that angry passions ought not to be aroused; for, then, those other moral feelings and intellectual powers, by which these passions are controlled in later life, are not yet sufficiently developed.

Minute details of the management of infants would of course be here out of place; but in regard to the infant's earliest sustenance, we cannot forego a remark. So plainly designated by nature for this purpose is the mother's breast, that the question admits of no dispute. For this exercise of maternal function, every consideration, both moral and physical, pleads; for, while the purest emotions of the heart are excited in both mother and child, the health also of both is thus mutually promoted. When young and healthy, it is the mother's bounden duty, as it ought to be her dearest delight, to nourish the being which she has brought into existence, with the food expressly provided by nature. But the capability of performing this duty is unfortunately not possessed by all mothers; and if it cannot be done with safety to the mother and advantage to the infant, a substitute ought to be obtained. Reference is here made to this point, more especially to advert to the fact that a considerable portion of the mothers of the better classes of society, thus incapacitated, have become so through errors of physical education, and the debilitating effects resulting from luxury, fashion, and dissipation; and such a mother would be most apt to perpetuate the error in her child, if a female.

As regards childhood and adolescence, our remarks will be limited to exercise in the open air. As the young throughout the animal kingdom are instinctively prompted to exert freely and actively their muscular energies, so, in the infancy of man, in conformity to this intimation of nature, should those harmless gambols which exercise the limbs, be encouraged, without reference to the constant guidance of a nurse. No

child should be debarred from exercise and the free use of pure air, as upon these, in a great measure, the health, vigor, and cheerfulness of youth depend. In the physical education of boys, error in this respect is but of occasional occurrence; but is very often the fate of female adolescence. How often does it happen that, in the over-anxiety of a mother for delicacy of complexion in a daughter, or in the apprehension that her manners may become vulgar, and her limbs coarse and ungraceful, she is so prevented from the enjoyment either of fresh air or exercise, that she acquires a feeble, sickly, and languid habit, which may, throughout the whole course of her life, render her helpless and capricious, and perhaps the subject of much suffering!

When, from a false idea of improving the shape or giving grace to the carriage, attempts are made in early youth to constrain the natural movements, by confining children for too long a period to any particular position, they become, as is well known to physicians, restless and uneasy, while their muscles acquire tricks of involuntary motion. Much of this is witnessed as the result of the mode of physical education still too much in vogue in schools; such as, precise methods of walking, and positions according to rule in sitting and during recumbency and even in reference to the sleeping posture. Now all these restraints upon nature, which require that the muscles must act in order to become developed, and must rest when they become fatigued, tend directly to the production of a shuffling gait, bandy legs, and a crooked back. To exercise all the muscles of the back, for instance, a child must run, jump, and roll over; but if all these forces are kept unexercised, they become weakened, and soon the balance of power is destroyed. Thus when a child is compelled to sit for hours on a bench without a back, many of the muscles of the spine become fatigued to such a degree, that they do not recover themselves; and as they are consequently overcome by their antagonizing muscles, a curve in the spinal column is produced. In a country school-room, where boys and girls are not taught how to sit, we find them on their benches without backs, all coiled up like hoops, the spinal muscles having taken a position most favorable for resting. Now if one of these boys or girls is told to rise, he or she stands up with a straight back and an erect head, this being done by no action which had been taught, but by the simple effort of *rested* muscles. In the spines of these children, deformities are almost unknown, while the boarding-school miss, who sits and walks according to rule, scarcely fails, in a greater or less degree, to become the victim.

Hence it follows that the corporeal exercise of the two sexes should not be unlike. Girls should not, as is too generally the case, be confined within the precincts of the nursery, or, if permitted the enjoyment of a short walk, be veiled and protected from every gleam of sunshine and every playful zephyr. Not less important to their health and well-being than to that of their brothers, is the unrestrained enjoyment of their limbs in the open air, with no ever-watchful eye to curb the lively joy of their unclouded spirits. As well might we attempt to improve the beauty and vigor of our forest trees, by transplanting the sapling to the green-house and there extending its tender branches along an artificial frame-work, as to hope, by means of belts, splints, ligatures, and confinement, in conjunction with the teachings of the posture-master,

to bestow upon the limbs of a child graceful form and motions, cheerfulness to its spirits, and vigorous health to its constitution.

In girls, after childhood, education is formally commenced, with all the zeal and earnestness that maternal solicitude can inspire; but every step is one of error, since all the free motions of the body and limbs are restrained. The young lady is now taught to keep her head erect and her shoulders drawn back, and to practise, at the same time, a certain demureness of look; and as muscular contractions, as just explained, require intervals of relaxation, and as to maintain long the head and shoulders in the position approved by the dancing-master, requires an effort beyond the powers of nature, it follows that, instead of strengthening the muscular powers, they actually become so enfeebled that deformity soon supervenes. If mechanical aid, in the way of a laced waistcoat, is now resorted to, the consequences are still worse; for a muscle thus consigned to inactivity, soon wastes away and loses its power.

Reference has already been made to the derangements of the system caused by constriction of the chest, the effect of which is, that in proportion as the breathing is interrupted, is the blood imperfectly vitalized; and as the nutrition of the whole body is immediately dependent on the blood, in the same ratio will all the organs of the body be diminished in energy. As the muscles of the back gradually become weaker from the continued pressure, until finally they are unable to sustain the incumbent weight, the various deformities of the spinal column speedily ensue.

But there are numerous other derangements which are consequent on tight-lacing, some of which have been already noticed. As the volume of air of each inspiration becomes diminished, this deficiency is compensated by increased frequency; and there is thus produced, by the disturbance of quickened respiration, not only a tendency to inflammatory action in the lungs, but the heart too becomes excited, with acceleration of the pulse, and finally even palpitation may supervene. As these evils may result from simple constriction of the chest, it follows that, at a more advanced stage, when derangements of the stomach, liver, menstrual function, the spine, in a word, all the organs of the thorax and abdomen, have added new sources of irritation, the complicated evils may become fearfully aggravated.

These errors of bodily constraint committed in female education, cannot be mentioned too often. They are thus adverted to by Dr. Alexander Rilgour: "Meditate on this, ye mothers, whose poor girls can scarcely walk, much less run and romp; and who procure for them crooked backs and pale cheeks. Meditate on it, ye parents who send your daughters to fashionable boarding-schools, in order that, in acquiring art, they may lose nature; and ye who are looking out for wives, say, will you take this deceptive creature, with her pale cheeks and fetid breath, and distorted body—the victim of her mother and fashion—or her who comes bounding down the hill-side to your arms, with her ringlets streaming in the wind, her face with the freshness and glow of health, her body in the luxuriance and freedom of unchecked and uncontrolled nature, and her kiss sweeter than

> 'Sabean odors from the spicy shore
> Of Araby the blest?'"

Moreover, the predisposition to consumption, caused by the conformation of the chest artificially produced by tight lacing, is further promoted by the inadequacy of the clothing even among women in the highest orders of society. "Too much confined within doors," says Professor Chapman, "by their domestic duties, they scarcely ever venture out adequately clothed, and particularly when they exchange the ordinary for the flimsy attire in which they are equipped on occasions of public exhibition. Then it is that the warm investments of the morning are substituted by the light gossamer draperies of the evening. With the neck and arms half denuded, and the feet scarcely more protected, do they rush at some late hour of the night from heated rooms, worn down and exhausted, to plunge into the external air, often cold, damp, and chilly, in a state of the greatest susceptibility to the aggressions of pulmonary affections."

Thus do ladies, as it has been well remarked, in obedience to the tyrannical laws of fashion, "*defy physical laws, breathe freely in armor, and are warm in gossamer.*" But women should be early taught that health and beauty are inseparable—that beauty cannot exist independent of healthful action; for unless the whole frame is preserved in health, it is idle to expect an augmentation of grace and symmetry in form, or increased brilliancy of complexion. These are but the outward signs expressive of the harmonious performance of the internal functions—the result of a mode of living which is conformable to the laws of hygiène.

But in vain will medical men demonstrate the truth of their precepts, advise, and warn: the *beau sexe* will not the less continue to brace in the chest and shoulders, until they become positively deformed. Instead of being allowed to attain its just proportions, uninfluenced by the interference of art, the body is gradually forced to assume forms, however unnatural, that the caprice of the day may chance to admire. There is just as much barbarism in this practice as in the pinching of the feet by the Chinese, or in the custom, still prevailing among a certain tribe in Oregon, of flattening their heads. "How a spider-waist," says a French medical writer, "should ever be regarded as a sign of beauty, puzzles us poor men mortals to understand." There is, after all, but one way of convincing the ladies of the danger and absurdity of this practice, which is to show that it really causes deformity, and thus diminishes to the same extent their attractions.

It hence appears from the preceding researches, that the object of hygiology is to place man in such a physical and moral condition, as will best advance his individual and social development; and to arrive at this result, it is necessary to determine the influence upon mankind of all surrounding circumstances, physical, moral, and intellectual, by which our organization is so remarkably modified; such as, for example, the agency exercised upon man, during the historical period, by the various governments, laws and creeds—by occupations, modes of life, and moral agencies—and by all the physical circumstances included under the general term of climate.

To investigate these various subjects in detail would require volumes. Under the head of climate, for instance, it would be requisite to treat of its meteorology and vital statistics. The former would comprise an inquiry into the mean annual temperatures and the distribution of heat among the seasons, the prevailing winds, the hygrometic condition and

purity of the atmosphere, in proportion to the influence of local causes, as well as intensity of light, magnetism, and electricity. The latter would develop the special agency of these climates, thus variously modified, upon man, as regards mortality, the formation of particular customs and habits, and their influence on his moral, intellectual, and physical nature.

These general laws might be conveniently illustrated by adopting a classification, consisting, first, of all atmospheric agencies, embraced under the term meteorology, which would include endemics and epidemics; secondly, all animal and vegetable aliments, both solid and liquid; thirdly, the corporeal actions or functions under the influence of the will, which would embrace the subject of physical education, the various labors of the field and the workshop, and consequently the diseases peculiar to particular artisans; and fourthly, the nervous system, as relates to intellectual exertion, the passions, etc., would constitute another distinct head.

These several subjects will be more or less illustrated during the progress of this treatise; but, as regards the United States, the investigation will be of a more special kind. Enough, however, has been already said, to show that the object of hygiène is a great and a good one; and that, as its aim is human happiness, it is essentially noble and godlike.

In illustration of the influence of climate upon the mean duration of human life, the following table is adduced by Dr. Motard, in his "*Essai a Hygiène Générale*," as the mean annual mortality in different degrees of latitude:

Within the tropics	1	death in	25	inhabitants.
From 20° to 40°	1	"	34·5	"
" 40° to 60°	1	"	43·2	"
" 60° to 70°	1	"	50·	"

In Iceland, it has been computed, from seven years' observations ending with 1831, that there is one death to 30 inhabitants.

That extremes of great and prolonged heat in inter-tropical regions, and of cold in hyperboréan, are adverse to general longevity, is sufficiently obvious; but, farther than as a general law, we put no confidence in the above table. Although extreme continuous cold enfeebles the functions of the animal frame, and thus stunts its development, yet the climates of Russia and Norway have at least the reputation of giving to their inhabitants a high longevity. It is, in fact, an admitted truth, that the most variable climates are best adapted for the development of the various mental and bodily powers. On the other hand, it is equally true, that in equatorial regions, premature old age and decay are induced as a consequence of the excitement and waste to which the powers of life are unceasingly exposed; but at the same time, we are not without the most satisfactory evidence that temperance and abstemiousness, as was illustrated in the early ages of the Church, by the history of those who sought a refuge from persecution in the sandy deserts of Africa, will secure, even there, a long life to their votaries.

That the above table, however, farther than as the most general law, is entitled to but little respect, will appear when the influence of local causes shall come under consideration; as, for instance, the fact that one class of a city has a mean duration of life three times greater than

another, or that the probability of life at birth, as in Geneva, has doubled five times in the course of three centuries. Besides, it will be shown, in treating of the climate of the United States, that the laws of temperature on the same parallels become so modified by the influence of physical geography, that a classification of *medical* geography having for its basis mere latitude, is wholly inadmissible.

The second head referred to above, viz., the *ingesta*, which comprises the nourishment introduced into the stomach, exercises, it will be seen in the sequel, so far as the production and supply of food is concerned, a controlling importance upon the increase and decrease of population; and, as experience also teaches us that years of scarcity and famine are, in many countries, years of pestilence, this branch of the subject acquires additional gravity. This theme has been extensively investigated by Dr. Melier, as will be seen in Chap. II.; and it has been also happily treated by Dr. John Ball, in his volume on "Regimen and Longevity," in which enlarged views of national dietetic usages and of the wide geographical range and cultivation of various vegetable substances for food, are furnished.

Upon the influence of arts, trades, and literary professions, of civic states and habits of living, upon the duration of human life, much has been written. As applicable to England, Shackrah's treatise has a high reputation: but it is unfortunately singularly deficient in statistical results. Lombard's work, on the contrary, possesses this merit in a high degree, as it is based on the statistical data furnished by the city of Geneva, from 1796 to 1830. Before bringing, however, this subject before the reader, it would seem best to lay before him some general historical views relative to hygiène.

Section II. *State Medicine viewed in its Historical Relations.*

It is a lamentable fact, that, in modern times, public hygèine has not received that share of attention from governments, either national or municipal, which it so richly deserves, not only on the ground of humanity and Christian benevolence, but on that of state policy. Looking at the remains of the numerous aqueducts of ancient Rome, of her stupendous edifices for bathing, and of her *cloacre* or sewers, in all which, by the way, she was rivalled in the ancient cities of Mexican and Peruvian civilization, the inferiority of modern cities generally, and of the "eternal city" herself, as she now is, cannot but make us feel the blush of shame. Among the ancients, the public salubrity was considered a matter of so much importance, that those wonders of antiquity, the Roman drains, were under the protection of tutelar deities—the goddesses Cloacina and Mephitina, and the god Sterquilinus; and at Rome, among the superintendents of essential structures, we find the names of Cicero and Agrippa; and among the Greeks, that of Epaminondas. Among the Assyrians, Medes, and Persians also, there were baths of great grandeur—so much so among the last named, that even Alexander, notwithstanding accustomed to the voluptuous ones of Greece and Macedon, was astonished at the luxury and magnificence of those of Darius.

Even the Bible, at a period as remote as the days of Moses, abounds in minute hygiènic enactments; and in the Koran also, prompted doubtless by the example of the Jewish lawgiver, various hygiènic ob-

servances were required. Many of these, however, such as the interdiction of the eating of swine, and the drinking of wine, were strictly in accordance with the climatic laws of that region. Nor did the Greek and Roman legislators fail to enact laws for the preservation of the public health. In Sparta, the education of the children was made an exclusive affair of the state; and here originated the gymnasia, which became general in all the Grecian States. While the youth were thus trained to the endurance of the fatigues and perils of war, they were, at the same time, at least in Athens, instructed in ethics and philosophy by the teachings of Aristotle, Plato, and others. At Rome, the combatants in wrestling and racing, in throwing the javelin and pitching the quoit, would, while yet warm and panting, plunge into the Tiber—a circumstance thus alluded to by the poet of the "Seasons;"

> Hence the limbs
> Knit into force; and the same Roman arm
> That rose victorious o'er the conquered earth,
> First learned, while tender, to subdue the wave.

All these facts are most intimately connected with the laws of vital statistics. In proportion as public and private industry are sustained by equal and beneficent laws, thus securing the greatest good of the greatest number, will the mean duration of human life be extended, provided that man does not, at the same time, infringe upon the equally immutable moral laws.

Many examples might be adduced of countries, once well-governed, and consequently prosperous and healthy, which, by a change of rulers, became a scene of desolation and of pestilence. A case in point is afforded by the altered aspect of Palestine, which, instead of having as formerly a crowded population dwelling in a "land flowing with milk and honey," is now almost a desert, possessed by the roaming and lawless Arabs. The same fate, with the loss of their liberty, has awaited Greece and Italy. As these cities fell into decay, in the same ratio as poverty took the place of wealth, was vigorous health supplanted by disease, and thus also was the usual population diminished. Thus has the face of Italy, and in a corresponding degree its climate, as regards salubrity, been changed at three or four distinct periods. By the incursions of barbarian conquerors, her cities and villas have been more than once sacked and burned, these despoilers laying waste, at the same time, her fields and vineyards; and to these causes of diminution of population were soon added famine and pestilence. The most highly cultivated districts of ancient Italy, as, for instance, Latium, with her hundred cities, now present a dismal aspect of desolation. How melancholy are these changes! The very temples and groves dedicated to Hygiëa and Æsculapius, are now the chosen seats of malaria!

Similar examples of desolation resulting from the same causes in other countries, might be readily adduced. In the history of Holland, we have a noble instance of how a people, sustained by free institutions, have been enabled not only to triumph over the most discouraging circumstances of physical geography, but even to convert these very circumstances into so many sources of wealth. Were these stimulants to industry, however, taken away by the oppression, for instance, of domestic tyrants, we should soon have, in proportion as her dikes fall to decay, another example of desolation breathing pestilence, and as

a consequence, depopulation. Such is the present condition of the island of Minorca under Spanish rule, compared with its state a century ago, when it was a British province.*

It is thus seen that history clearly establishes an inseparable connection between health and general longevity on the one hand, and social order and good government on the other. The true sign of a real and permanent increase of population is, says Baron Humboldt, the increase of the means of subsistence; and hence, we cannot but admit that an important truth is represented by the metaphorical expression of a political economist, "*Wherever there's a loaf added, there's a man born.*"

A comparison of the vital statistics of the past and present century is highly favorable to a system of public hygiène. In London and Paris, mortality has diminished in a ratio with the protection extended to the public health by hygiènic measures; and here, too, epidemics are fatal in proportion as the population is crowded and poor. In Paris, in the official report on the Cholera, it is shown, that in the city, compared with the quarter of the Tuilleries, the number of cases in the former was thirty times greater than in the latter, while the deaths were twenty times more numerous.

With the advance of Christianity and civilization, the mean duration of life has been extended; a deduction which is the result of numerical calculations, in the same cities and countries, at different and remote periods. In consequence of greater security in person and property, more certain returns in the various industrial pursuits, better and more abundant food, and other causes of a kindred nature, the civilized countries of the present day give a higher average of the duration of human life, than perhaps at any other period of the world's history. It is, of course, not to be understood that any reference is here made to the days of Methuselah. In Geneva, since 1560, we have conclusive statistical evidence that the probability of life at birth has gradually become five times greater. In Paris, as just remarked, there has been a diminution of mortality just in proportion as the public health has been protected by hygiènic measures; and hence, if we go back as far as 1350, we find a mortality as high as 1 in 17; in 1660, it was 1 in 25; and from that period it has gradually grown more favorable, having been, in 1821, 1 in 32; and in 1826, 1 in 36. The proportionate number of deaths in London, at the commencement of the last century, so far as the estimated numbers of a people may be relied upon in the absence of a census, was as much as 1 in 20. At the period of the first census, (1801), the ratio within the bills of mortality had fallen to 1 in 39; and at the present time it is calculated to be 1 in 40. Hence it is obvious, that a very great amelioration in mortality has occurred within a century; but the assertion made by all writers on this subject, that the value of human life in London, because the ratio of deaths has been diminished one half in a century, has doubled within the same period, is a very gross error. Instead of a duplication of the mean duration of

* Vide "New York Journal of Medicine" for July, 1843. *Article* "The Endemic Influence of Evil Government, illustrated in a view of the Climate, Topography, and Diseases of the Island of Minorca. By J. M. Foltz, A. M., M. D., Surgeon U. S. Navy."

human life within a century, the increase has been only from 25 years and 1 month to 29 years and 10 months. The nature of this error will be shown more fully in the sequel; suffice it here to say, that it has arisen from regarding the proportion of deaths as exponents of the average ages of deaths.

From the registers of population, age, sex, disease and death, said to have been kept at Rome for the period of 1000 years, it has been inferred, that the probable duration of life among the better classes was only about thirty years; and hence, as the mean duration of life among the same class in Great Britain is at least fifty years, (the mean of the whole population being forty-five), these would have an advantage over the Romans, at the period of several centuries before Christ, of not less than fifteen years.

This deduction, which is considered by most writers as a strong point, must, however, be received with many grains of allowance; for, to us, the opinion that the extreme period of life has been the same, under the existing physical conditions of the globe, subject, of course, to be modified by surrounding circumstances, seems scarcely to admit of a doubt. At all periods of man's existence, favorable circumstances would necessarily be attended by greater general longevity, whether as regards the mass or a particular class of the community. It is no way probable that there has been a gradual and uniform prolongation of the period of human life; for we find that the three-score-and-ten years of the Hebrew, as the allotted term of a ripe old age, is still the law of the present day.

By John Finlaison, Esq., Actuary of the National Debt, in his official report to the Lords of the Treasury, in 1829, and which was printed by the order of the House of Commons, the same opinion is advanced. "The boundary," he says, "seems to have remained impassable since the days of Eli, the Priest," (a period undoubtedly 3,000 years ago,) who "was ninety and eight years old, and his eyes were dim that he could not see; and he died, for he was an old man and heavy, and he had judged Israel forty years." Neither does it appear that the ordinary events of forming connections in marriage and rearing families at the usual periods of life, have at all varied within the same length of time. It was the practice in the days of Herodotus to reckon three generations as equivalent to a century, and very accurately. This allows thirty-three years and four months for the increment of time between the birth of a father and the birth of *that son who succeeded him* in the government of the State or family. Whoever chooses to reckon over the same events in regard to the Stuarts, Kings of Scotland, will find the same period true to the day!

Mr. Finlaison quotes the following estimated values of annuities by Vulpian, in the time of the Emperor Justinian, A. D. 529. (Pandect, lib. 35, tit. 2.,) from which very diverse conclusions have been drawn by different writers:

Age.	*Years' Purchase.*	*Age.*	*Years' Purchase.*
Under 20	30	At 44	15
20 to 25	28	" 45	14
25 to 30	25	" 46	13
30 to 35	22	" 47	12
35 to 40	20	" 48	11
At 41	18	" 49	10
" 42	17	50 to 55	9
" 43	16	55 to 60	7
		Above 60	5

"It is uncertain," says Mr. F., "whether in this computation he made any allowance for discount, or something equivalent in meaning; or whether, as is much more probable, this was his notion of the number of years which a life at each age was likely to live. If the latter be the meaning, the Romans must have had but a miserable chance of life in old age.*

We are enabled to add, however, that among the Greeks and Romans, history gives many examples of great longevity; but mere isolated cases of longevity, as will be seen in the sequel, have no direct relation with the mean duration of life, inasmuch as instances of extreme longevity are as frequently found, indeed more so, in the most unhealthy localities, and in the period of man's history when population was in its worst state, as in the most salubrious districts, and at periods characterized by the greatest extension of the mean duration of human existence. What we here refer to is general longevity. By Pliny, the younger, it is stated, that in the year A. D. 76, in the reign of Vespasian, memorable as being a year of taxing, there were found, in that part of Italy lying between the Appenines and the Po, 124 persons at 100 years and upwards. Thus:

54	At	100	Years,
57	"	110	"
2	"	125	"
4	"	130	"
4	"	135 or 137	years,
3	"	140	"

Independent of these, Parma contained five, of whom three were 120, and two, 130; Placentia had one aged 131; Faventia, one at 132; and Rimino, one of 150. But these facts, as Pliny gives no account of the population or of the deaths, stand so isolated as not to be available for any useful purposes. Besides, the extraordinary fact will be made to appear, that an unusual number of centenarians is no indication of the vitality of the masses, that is, of national health or general longevity.

It is a curious fact, that Lucian devoted a treatise to the subject of the enumeration of distinguished individuals of antiquity who attained the age of 80—100 years. Among these a few may be here noticed: and first of kings and generals: Mithridates, warring against Rome to his

* To give the reader an opportunity of exercising his own judgment in the decision of this question, it may be well to give here the original document of Judge Ulpianus, as recorded by Justinian: "Computationi in alimentis," &c.—Southwood Smith, vol. 1, p. 132.

last hour, died at 84; Numa and Servius Tullius, both died at 80; Tarquin the Proud, in his exile, at 90; Hiero, of Sicily, at 92; Ptolemy Lagus, in Egypt, at 81; Lysimachus fell in battle at 85; Artaxerxes Mnemon, of Persia, at 86; Artabazus, made king at 86; Attalus died at 82, etc.

Among the Greek philosophers, noticed by Lucian, who were at the head of their respective schools, are the following: Cleanthes, aged 99; Zeno, 98; Nestor, tutor to Tiberius, 92; Zenophanes, 91; Diogenes, the stoic, 88; Cameades, 85; Zenocrates, 84; Posidonius, 84; Critolaus, 82; Athenodorus, 82; Plato, 81; and Chrysippus, 81.

Among the historians, poets and other writers, we find the following: Isocrates, who wrote the celebrated panegyric at 96, killed himself at 100, on learning the defeat of his Athenian countrymen at Cheronea; Cratinus, Philemon, and Epicharmis, all three comic writers, died each at 97; Zimæus, at 96; Sophocles was choked at 95; Hypsicrates died at 92; Xenophon and Aristobulus, at 90; Anacreon and Stesichorus, both at 85; and Apollodorus and Eratosthenes, at 82.

As the real meaning of Judge Ulpianus's document has never been satisfactorily explained, we are left to exercise conjecture. It may be assumed, with good reason, that it includes only the higher classes of the resident male citizens of Rome; and, as regards the lower classes, or the inhabitants of the Roman provinces, we cannot even form a rational supposition. Compared with civilized Rome, the value of life subsequently in barbarian Europe, doubtless fell to a very low point; and from this minimum, it again gradually arose with the revival of civilization; and now it may be fairly assumed that the whole mass of European population stands on an equality with the select class in ancient Rome. In some favored localities of the present day, however, this improvement of man's condition far exceeds, no doubt, even that of the first class of Roman citizens.

Section III.—*The Sanitary Condition of the different Classes of the Population, in Town and Country.*

We are now prepared for the consideration of this highly important inquiry, which has, in modern times, engaged the attention of Germany, France, England, and other European countries, and which is still prosecuted with undiminished zeal. Our object now is to illustrate the remark made in the early part of this chapter, that thousands annually perish in England and Wales, from a neglect of those conditions which Divine Wisdom has appointed as positively essential to the well-being of man; and equally obvious is it, that in all other countries do similar effects follow like violation of hygienic laws. This highly important subject admits of an extended exposition; and in pursuing the investigation, the five Annual Reports of the Registrar-General of England, and the Report on the Sanitary Condition of her Laboring Population, with its Supplement, on Interments in Towns, will be chiefly brought in requisition. The titles of these several works have been already cited.

But a faint conception of the evils under which the laboring classes of Europe suffer, can be afforded by partial descriptions of their condition. Of those defects which are most important, and which come most directly within practical legislative control, are, the neglect of drainage, and the removal of the noxious refuse of houses, streets and

roads. As regards the sanitary effect of town and land drainage, and public supplies of water, no evidence need be here adduced, as all the world, and every age of man's history, testify to their advantages. Another class of causes consists in the internal economy and bad ventilation of places of work and workmen's dwellings, in connection with the domestic habits affecting their health. There are also in their private dwellings, an over-crowding and a want of separate apartments, which exert a most unhappy influence upon the morals of this class of the population.

Than the moral and physical evils, as well as the management of the poor in great cities, there is no subject that lies more peculiarly within the scope of public hygiène. That the fatality of epidemics is in proportion as the population is poor and crowded, is proved on every hand. Indeed, no branch of medical inquiry is more interesting than the history of epidemics—a great question, which, as has been truly remarked by Sydenham, has never been treated "in proportion to the dignity of the subject." The history of London shows, that in the same ratio as filth, want and misery, are removed, do epidemics lose their chief power. From 1592 to 1666, a period during which this city was remarkable for its impure state, the average mortality from the plagues, which appeared at intervals of ten or twelve years, was equal each time to a fourth part of the whole population. Since the latter period, the severest plague that has visited London was epidemic cholera, by which, in consequence of the modern improvements of the city, only one person died out of 250 inhabitants. These interesting statistic views, in which the influence of the progress of civilization is evinced in a gradual diminution of mortality, have been already adverted to; and they will be still further illustrated in the sequel. Among the causes of this increased salubrity, may be enumerated, the improved condition of the lower classes of society, in most countries, as regards food, clothing and fuel —better habits, as respects cleanliness, ventilation, and the use of spirituous liquors—and improved medical practice, more especially in reference to the introduction of prophylactic means, as for example, vaccination. In these circumstances may be found the exemption of Great Britain, for nearly two centuries, from those desolating epidemics just referred to; and, as there has been no recurrence of the plague in London since 1665, which was the year preceding the great conflagration which destroyed those narrow streets in which it was practicable to shake hands from the attic windows of opposite sides, we may trace the cause, in great part, in the improved system of medical police that followed.

All statistical inquiries show that evils of the most fearful description must inevitably result in urban populations, if the means of ameliorating their condition are wholly neglected. One-tenth of the entire population of London are paupers, and every morning 20,000 persons rise without knowing where they are to sleep the next night. In Dublin it is known that, in one year, 60,000 persons passed through the fever hospital. In Paris, to cap the climax, one-sixth of the whole population die in the hospitals, while every third child born is illegitimate!

ART. II.—*On the effects of Bloodletting on the Young Subject.* By JOHN B. BECK, M. D.,* *Professor of Materia Medica and Medical Jurisprudence, in the College of Physicians and Surgeons of New York.*

THERE is no subject, perhaps, so deeply interesting to the practical physician, as the effects of Bloodletting on the human system, and the various uses to which it may be applied in the management of disease. In promptness and power, it exceeds all other agents, and its capacity for doing good or harm is proportionally great. It is resorted to, also, at every period of life, and by some it is even prescribed with equal, if not more freedom in children than in adults. It becomes then a question of the greatest moment to determine, if possible, whether the age of the patient has any influence in modifying its effects. And this is the subject upon which I propose to make a few remarks.

That the youngest child can sustain the loss of blood within certain limits, as well as the adult, is manifest from a variety of facts. Thus children are sometimes born in a state of asphyxia from apoplexy. On dividing the cord and letting a moderate quantity of blood flow, respiration is established, and every thing does well. Again: not unfrequently, from not applying the ligature sufficiently tight around the cord, or from the cord contracting and thus loosening the ligature, hæmorrhage takes place, and yet no injurious consequences result. Besides this, we know that in cases of disease, the youngest children may be bled, not merely without injury, but with advantage. When, however, the loss of blood is carried beyond these limits, important peculiarities are observed, showing a difference in the effects produced in the young subject, from those in the adult.

The first peculiarity is, that the young subject does not bear the loss of considerable quantities of blood, so well as the adult. I am not aware that children fall into a state of syncope from the loss of blood more readily than adults; but when syncope does come on, it is very certain that they do not recover from it so readily, and they are always in more or less danger. In the adult, syncope from the loss of blood, unless the quantity be very large, is a state which, as a general rule, is attended with little or no danger, and from which the patient speedily recovers. Hence it is that physicians are continually in the habit of inducing it in the management of certain forms of disease, and not merely with impunity, but evident advantage. In the young subject it is not so, and it is a state always attended with hazard. If the child recover from it, it does so very slowly, and every now and then it sinks irretrievably under its influence. That this is a fact, is confirmed by abundant testimony, on the part of those who have taken the trouble to make the necessary observations. Dr. Marshall Hall, in speaking on this subject, says, "In infancy, the state of syncope (from the loss of blood) is a state of danger."† Evanson and Maunsell remark, "As a

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* We republish from the Annalist (No. 6, Vol. II.) the following article from the pen of Dr. Beck, in compliance with the request of some of our subscribers, and to complete a series commenced, and thus far continued, in this Journal. We trust the health of the writer will soon be re-established, and that the profession may long enjoy the benefits of his rare learning and sound practical skill.—Ed.

† Researches on the Morbid and Curative Effects of the Loss of Blood, by M. Hall, M. D., p. 87.

general rule, it is well to stop the flow of blood when decided pallor takes place, without waiting for actual fainting, from which children do not quickly recover."* Armstrong says, "Do not bleed to actual syncope in children, as they are apt to fall into convulsions, of which they may die. Children do not recruit from very large bleeding like adults."† Dr. Ryan observes, "The abstraction of blood in cases of infants and children until fainting occurs, is the worst practice that can be imagined, as convulsions or death may be produced."‡ Indeed, the general fact admits of no question; and the reason is obvious enough, if we reflect for a moment upon the nature of the agent, and at the same time compare it with the susceptibility of the subject. Carried to the point of syncope, bloodletting is one of the most direct, speedy and profound sedatives that we have in our possession. In a few moments, it reduces the subject from a state of perfect health or the high excitement of disease, to the state of temporary death. Now it is very evident that the capability of recovering from such a state, must be just in proportion to the powers of the constitution. From the very nature of its organization, therefore, it is obvious that the system of the child cannot sustain so well as the adult a shock so sudden and powerful as this.

The second peculiarity attending the loss of blood in the young subject, is, that the nervous system is more powerfully affected than in the adult. The evidence of this is, that convulsions and coma more frequently occur after the loss of blood in children, than in adults. In the adult, both these occurrences sometimes take place, more especially convulsions. Thus, for example, puerperal hæmorrhage is not unfrequently followed by them. I have witnessed the same thing in a gentleman of irritable habit, who had been bled too largely from the arm. He had lost about a quart of blood, when incipient syncope came on, followed immediately by a violent convulsion. In children, however, these occurrences are much more common; and the reason, no doubt, is the greater predominance, as well as impressibility of the nervous system. A great variety of causes, we know, will induce convulsions in a child, and among these, exhaustion is a very common one. With regard to coma, too, this may be brought on in children by any debilitating cause. A striking illustration of this we see now and then in diarrhœa, which has been continued too long. In these cases, the brain becomes suddenly affected, and a state of stupor or coma is induced, which not unfrequently is mistaken for Hydrocephalus. The same thing occurs from the loss of too much blood.

The third peculiarity is, that the repetition of bloodletting is not so well borne by the child as the adult. A child of good constitution and ordinary strength, may bear a first bleeding, perhaps quite as well as an adult. Under particular circumstances, too, of disease, a second may be borne very well. Beyond this, as a general rule, it will be found, I think, that the child cannot well sustain the loss of blood. On this point, I believe, there is little or no difference of opinion among men of judgment and observation. Dr. John Clarke says, "Very young children bear very well the loss of blood even to fainting, once, or twice, but they ill bear a more frequent repetition of bleeding. Their powers

* On the Management of Diseases of Children, p. 107.
† Lectures, &c., by John Armstrong, M. D., p. 387.
‡ Manual of Midwifery, by M. Ryan, M. D., p. 475.

sink under it, and by no art can it be replaced."* Marshall Hall says, "In infancy, a second or a third bloodletting is borne with difficulty."† Evanson and Maunsell say, "Repetitions of bloodletting are not well borne by the child."‡

The fourth peculiarity is, that the effects of local bloodletting, especially leeching, are different upon the child, from what they are upon the adult. In the adult, the effect of leeching is in a great measure local, and it is not usually resorted to until after general bloodletting is considered inadmissible. In a child, on the contrary, it produces very much the same effect as a general bleeding. From the greater vascularity of the skin, too, the amount of blood lost by a leech, applied to a young subject, is much greater than in the adult, and it is frequently much more difficult to arrest the hæmorrhage from it. The general effect, then, of leeching, on the young subject, is much greater than upon the adult. Hence it is that cases are so frequently occurring, in which children die from leeching. Of this we have numerous cases on record. Dr. Christison says, "I have twice known children bleed to death in hospital practice, the nurse having labored under a common prejudice among their craft, that leech-bites cannot bleed too much."§ Pereira states, that "in two cases of infants, I have seen exhaustion with insufficient reaction, consequent on hæmorrhage after a leech-bite, terminate fatally."‖ Ryan says, "The loss of blood from a single leech-bite has caused the death of a child."¶

From the foregoing, then, it would seem, that although a child may bear the loss of certain quantities of blood, perhaps quite as well as the adult, when carried beyond this, they do not bear it so well, nor do they bear the repeated and continued loss of blood so well; and under these circumstances, dangerous and even fatal consequences are apt to ensue. In other words, bloodletting is an agent which operates with more power, and is attended with more danger in the child than in the adult.

If all this be so, then some conclusions may be drawn with regard to the practical application of this agent, which, to the young practitioner at least, may be of some importance.

1. Great caution should be exercised in bleeding children to the point of syncope. If the state of syncope be attended with the danger already alluded to, it is very certain that nothing can justify us in producing it, unless it be determined that it is essential to the management and cure of the case. Now, that in most cases, even of decided inflammation, it is not necessary to carry bloodletting to this extent, is very certain. We know that it is not so in the adult, and it evidently cannot be so in the child. As a general rule, therefore, it cannot be required. By some high authorities, however, it is supposed that under certain conditions of diseased action, the safety of the patient depends upon the production of syncope. Thus, for example, in croup, bleeding ad deliquium has been insisted upon by the late Dr. Bayley of New York,** Dr. Dick of Alexandria,†† and Dr. Ferriar of Manchester. The

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* Commentaries on the Diseases of Children, p. 103.
† Researches on the Loss of Blood, p. 87.
‡ On the Diseases of Children, p. 108. § Dispensatory, p. 492.
‖ Materia Medica, Vol. 2., p. 769. ¶ Manual of Midwifery, p. 475.
** New York Medical Repository, vol. 12, p. 331.
†† Barton's Med. and Phys. Jour.

latter especially speaks of it, as "the essential point of the cure, without which no relief can be effected."* If in any disease the practice be justifiable, it certainly is in this; and it cannot be denied, that in a great number of instances it has been resorted to with safety. Notwithstanding this, general experience has abundantly established the fact, that even here it is not necessary, and that all the beneficially sedative effects of the remedy may be obtained, without going to this extent. On this point there appears to be, at the present time, a pretty general concurrence of opinion among enlightened practitioners; and the rule of practice ought to be, *never* in any case to bleed to syncope, but to stop as soon as paleness of the lips and cheeks comes on. In this way all the good of bloodletting is secured, while the risks of syncope are avoided.

2. To determine the precise amount of blood proper to be drawn, is a matter of much greater nicety, and involves more serious consequences in the child than in the adult. In the adult, the loss of a little more blood than is necessary, as a general rule, is a matter of no very great consequence. In the child, on the contrary, it may prove fatal. In the adult, too, we have means of judging how far it ought to be carried which we have not in the child. Thus, for example, the pulse, which in the adult is so valuable a guide in these cases, cannot be depended upon at all in the child. It is always, therefore, a very nice and difficult problem in practical medicine, how to adjust properly in a child the amount of blood necessary to be drawn, to the exact wants of the case. Now there are only two ways in which this can be done. The first is, by fixing upon a certain amount as suitable to different ages. The second is, to judge by the actual effects produced at the time of taking the blood. With regard to the first of these modes, it is evident that it must be a very unsatisfactory guide, if we recollect that no two constitutions are precisely alike, and that there is every difference in the capacity of different systems, even in the same disease, to bear the loss of blood. Then, again, the same disease exists in different degrees of violence, and of course requires a modification in the amount of depletion. Besides all this, different diseases do not require and cannot tolerate the same loss of blood. A general standard, then, founded upon the age of the patient, is really good for nothing, except as a mere approximation. In individual cases, it must be inapplicable. Hence it is, that all those standards laid down by authors differ so much from one another, and must necessarily do so. If blood be taken by *leeches*, the difficulty is still further increased, from the circumstance that the desired quantity can hardly ever be obtained with any degree of precision: if it is so, it is purely by accident. That this must be so is evident, if we recollect the variable quantities of blood drawn by the leeches themselves, and more especially the greater differences in the after-bleedings. It is not yet settled, I believe, exactly how much blood a leech will draw. Christison says, "Twice as much blood may be usually drawn by fomentations, as by the suction of the leech. A single leech, when applied successfully, may thus be held to draw, from first to last, *about half an ounce of blood on an average.*"† According to Evanson and Maunsell, "the quantity of blood obtained by a good

* Medical Histories and Reflections, by John Ferriar, M. D., p. 371, Am. Edition.
† Dispensatory, p. 492.

leech, allowed to bleed for half an hour, may be estimated *at one ounce.*"* Mr. Pereira says, "I believe *four drachms* to be the maximum. On an average I do not think we ought to estimate it at more than *a drachm and a half*;"† i. e., the quantity taken by the leech itself, without reference to the after-bleeding. Now the fact is, it is impossible to specify the amount of blood drawn, either by the leech itself or in consequence of the subsequent bleedings. Leeches differ in their size very greatly, and there must, of course, be a great difference in the quantity of blood they are capable of taking. Then, again, there is every difference in the after-bleedings, depending on the vascularity of the skin, the part of the body to which they are applied, and various other circumstances. From all this, it is evident how unsafe it must be to draw blood from a child, according to any average standard.

With regard to the second mode, that of judging of the extent to which it should be carried by the effects produced at the time: in many cases this answers exceedingly well. In inflammatory complaints, where the full effect of the loss of blood may be necessary, the rule can be satisfactorily applied, and the best plan is to bleed in the erect posture, until pallor of the face comes on, without producing actual syncope. In the adult, according to Marshall Hall, the production of actual syncope constitutes the criterion as to the exact amount which the case requires, as well as of the capacity of the system to bear the loss of blood, and therefore he recommends this as the rule for the due administration of the remedy. Now, that this will not answer, must be obvious to every one. Every practitioner knows that cases are continually occurring, in which actual syncope comes on after the loss of a few ounces of blood, when large quantities are afterwards required to be drawn. In children, of course, the rule cannot be applicable. In them, the loss of so much blood as to bring on only approaching syncope might not only be unnecessary, but be attended with danger. From all this, then, it would appear that we are not in possession of any precise mode of determining how much blood ought in all cases to be taken in children; and this shows the necessity of great caution and the exercise of sound judgment, in the use of the remedy.

3. From the uncertainty in estimating the quantity of blood lost by leeches, and the dangers attending the loss of too much from them in children, too great caution cannot be exercised in their use. From the manner in which leeches are ordered by some physicians, in the diseases of children, one would be led to suppose that no harm could ever result from them. From the ease, too, with which they may be prescribed, and the appearance of energy which it gives to the practitioner, it is to be feared that not unfrequently they are used without being actually necessary; and even when necessary, they are suffered to draw blood without sufficient regard to the quantity which may be lost. Now it should always be recollected, as already stated, that leeches operate differently on the child from what they do on the adult. In the latter, they are in a great measure local in their action, and may be, and generally are, used when general bleeding is contra-indicated. In the child, on the contrary, they act in the same way as general bleeding. Their sedative effects, therefore, upon the constitution of the child, are

* Practical Treatise on Children, &c., p. 106.
† Materia Medica, vol. 2, p. 769.

much greater; and if suffered to bleed beyond a certain limit, they endanger life. On these accounts, it is more necessary to be cautious in the use of them in children, than in adults. It is not my intention to go into any particulars, in relation to the mode of conducting the process of leeching. There are a few points, however, of a practical character, connected with this subject, which may not be unworthy of notice. 1. When leeches are applied to a child, the patient should always be placed in the erect posture. The same rule, indeed, should be observed, in whatever way blood is drawn. If it be a fact that leeches act like general bloodletting upon the child, the propriety of this rule must be obvious; and it is the more necessary to insist upon it, because it is hardly ever observed. As soon as any paleness of the lips or face appears, the child should be placed in the recumbent posture, and the bleeding arrested. 2. When leeches are applied to a child, the patient should never be left until after the flow of blood is completely stopped. 3. Leeches should never be applied at bed-time, and suffered to bleed during the night. In this way, the patient has, in more cases than one, bled to death. If applied late at night, they should be watched just as in the day-time. 4. As a general rule, leeches should not be applied to soft parts destitute of support from underneath, in consequence of the difficulty of making pressure sufficient to arrest the hæmorrhage. The importance of this was first noticed by Dr. Cheyne, who advises them to be applied in croup, not to the neck itself, but over the clavicle, sternum, or ribs.* 5. Leeches sometimes open into arteries, and dangerous hæmorrhage has ensued from this cause. A case of this kind happened, in which the temporal artery was thus opened, and Sir Astley Cooper was obliged to divide the artery before the hæmorrhage could be arrested.† In all cases, therefore, the progress of the bleeding should be carefully watched.

4. If bloodletting be so profound a sedative to children, it is evident that it is capable of doing a vast deal of harm in cases unsuited to its use, and that it requires a very nice discrimination of the character of the case, before it can be used with safety. This may appear very common-place; but, common-place as it is, it is to be feared that it is not sufficiently borne in mind in actual practice. The presence of inflammation or congestion is generally considered a condition justifying and requiring a resort to bloodletting, and so indeed, as a general rule, it is; but it is not universally. Thus, for example, the inflammation attending scarlatina does not usually require or bear well the loss of blood; and there can be no question that, in this complaint, many a child has been sacrificed by a resort to this remedy. Then, again, symptoms analogous to those produced by inflammation or congestion result from a cause directly the opposite, viz.: irritation or mere exhaustion. Illustrations of this we see frequently in affections of the head in children, convulsions, &c. In these cases, if the cause of the difficulty be mistaken and depletion be resorted to, the result may be fatal. All this shows that, before bloodletting is used in children, the nature of the case should be investigated more nicely even than in the adult.

5. In the use of bloodletting in the young subject, especial regard should be had to their constitutions, as well as their mode of living. No

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* Pathology of the Larynx and Bronchia, by John Cheyne, M. D., p. 57.

† Johnson's Med. Chir. Rev., vol. 9, p. 71.

principle is better understood, or ought to be so, even in adults, than that, in the use of debilitating remedies, due regard should be had to the powers of the system. No practice is safe which does not take into consideration the relative capacity of the system to bear them; otherwise the remedies may be more fatal than the disease for which they are prescribed. Now we know that in the adult there is every difference in this respect. In the management of the same disease, accordingly, in different individuals, a very different course of treatment is necessary, if not in the remedies themselves, at least in the extent to which they are carried. In the young subject this is still more necessary. Children whose constitutions are naturally feeble and vicious, or have been enfeebled by debilitating causes, such as poor diet, confined air, &c., sink very readily under the influence of depressing remedies. In these, bloodletting is badly borne, and should never be resorted to unless absolutely necessary, and then in moderate quantities.

6. Great caution should be exercised in the repetition of bloodletting. After what has been already said in relation to the effects of repeated bloodletting on the young subject, I should not again allude to it, were it not to notice the opinions of an eminent authority. Dr. Rush, in his "Defence of Bloodletting," makes the following statement: "I could mention many more instances in which bloodletting has snatched from the grave children under three or four months old, by being used three to five times in the ordinary course of their acute diseases."* That the children alluded to by Dr. Rush survived this treatment I do not doubt; but that these repeated bleedings were necessary, I can hardly believe. At any rate, a practice like this, if generally adopted, would, in my humble opinion, end in the most disastrous results.

In concluding this paper, I trust it may not be thought that I am opposed to the use of bloodletting in the diseases of children. The physician who discards this agent, understands but poorly his profession or the duty which he owes his patients. The proper use of a remedy, however, is one thing, the abuse of it is another; and I must express the opinion, founded on no small observation, that it is frequently resorted to in children when it is unnecessary—when necessary, it is often carried too far—and that in its general use, there is frequently an absence of precision and care, which in many cases renders it a most dangerous remedy. With regard to the use of bloodletting generally in this country, there can be no doubt that the authority of Dr. Rush has exerted an influence the most deleterious. That it should have done so is not surprising. Living at a time when medicine was yet in its infancy among us, a tthe head of the oldest and most influential of our medical schools and attracting by his enthusiasm and his eloquence a large proportion of the students of the country, his sway for a series of years was unlimited, and his sanguinary precepts and his still more sanguinary practice† were speedily diffused from one end of the country to the

* Med. Obs. and Inqs., vol. 4, p. 300.

† To justify the language used above, and which may be considered too strong by some, let me make a quotation or two from Dr. Rush's celebrated "Defence of Bloodletting." "Bleeding should be continued while the symptoms which first indicated it continue, should it be until four-fifths of the blood contained in the body

other. Although sad experience has long since exposed the fallacy, as well as danger of his doctrines, yet many of the evil consequences of them are still to be met with; and not the least of these, it appears to me, is the opportunity which they have, indirectly at least, afforded for the prevalence of quackery. It is a part of our nature to fly from one extreme to another. When an error is once exposed, we are apt to go immediately to its opposite, inferring that what is the reverse of wrong must necessarily be right; and so it has been in regard to bloodletting. The public having been made acquainted with the evils of the practice of Dr. Rush, a prejudice, if not general, at least very extensive, has been created against the remedy itself; and empirics, always ready to play upon the weaknesses and prejudices of the community, have seized upon it for the mere purposes of traffic. Accordingly, the land is now filled with a set of men who pretend to practise medicine, without resorting not merely to bloodletting, but many of the other remedies sanctioned by long and tried experience. And what is melancholy, but true, they find a ready sympathy in a large portion of the community. Whether I am too severe in attributing the popular empiricism of the day to the influence of Dr. Rush, must be left to the judgment of the profession. One thing, however, is very certain, and which we see illustrated every day. Whenever a person has been overtaxed with active medicine, he is apt to discard all belief in medicine generally, and he is then ready to fall into any absurdity. It is with medicine as it is with religion: superstition once thrown off, infidelity follows, and the result in both cases is the same. Calm reflection and rational inquiry are out of the question, and boasted independence speedily becomes the easy prey of the knave and the empiric.

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are drawn away." Med. Obs. & Inq. vol. 4, p. 353. The amount of blood in an adult is estimated at about 32 lbs. Four-fifths is over 24 lbs.!

Again, in enumerating the advantages of bloodletting, he says: "In cases where bleeding does not cure, it may be used with advantage as a *palliative* remedy. Many diseases induce death in a full and highly-excited state of the system. Here opium does harm, while bleeding affords certain relief. It belongs to this remedy, in such cases, to save pain, to relieve convulsions, to compose the mind, to protract the use of reason, to induce sleep, and thus to smooth the passage out of life." Med. Obs. and Inqs. vol. 4, p. 357. In other words, if I understand him, one of the advantages of bleeding is, that it makes persons die easily! This reminds me of a melancholy case which I once witnessed. A young gentleman, about eighteen years of age, had been suffering about three months under organic disease of the brain. During this period he had been subjected to every kind of treatment. Bloodletting, emetics, cathartics, mercurials, tonics, &c., had all been used in succession, but without arresting at all the progress of the disease, and he had now become stone blind, was paralytic, and reduced to the extremest state of emaciation and debility. In short, he was barely kept alive by the use of stimulants. In this state of things a friendly doctor happened to drop in, and expressed the opinion that the disease was inflammation of the brain, and that a good bleeding would relieve him. Notwithstanding the urgent remonstrances of the attending physician, that the result would be almost immediate death, the idea took with his friends, and he was bled by the doctor who suggested the practice. As might have been expected, in about six hours he was a corpse, and the great consolation seemed to be, that he died so easily! Verily, on becoming acquainted with such practice, one would be tempted to believe that the Emperor Nero must have been a very tender-hearted man in condemning Seneca to so pleasant a mode of terminating his existence as bleeding to death. For the particulars, see the Annals of Tacitus, book 15, sect. 60.

ART. III.—*Epidemic Erysipelatous Fever*, as it occurred in Bethel, Fairfield Co., Conn. By H. N. BENNETT, M. D.

ALTHOUGH the history of Epidemic Erysipelas, as it has occurred in various sections of this country, has been written and re-written, yet I have thought it might not be wholly unimportant to publish a sketch of the recent epidemic which has prevailed in this town, and which has been attended with an alarming degree of fatality. Notwithstanding the great similarity between the general symptoms, the local lesions, and the mortality attending this disease, in every portion of the United States in which it has occurred, yet the veil which obscures its etiology, perhaps even its pathology, remains impenetrable to the vision of the most scientific investigator. Believing that every closely-observed fact, in relation to a malady of this character, may tend to elucidate some points of interest in relation to its cause, its nature or its effects, I shall give the history of this disease, as I have seen it, in its different phases, for a period of four successive months. The number of cases which I have had under my own direct observation and treatment during this time has been seventy-three. Although the disease prevailed throughout a large portion of the town of Danbury, still the *foyer* of the epidemic was evidently that section in which I am located, and I shall confine myself exclusively to an analysis of the cases which occurred in my own vicinity.

This epidemic was preceded by no unusual phenomena in the ordinary diseases incident to the autumnal months, with the exception of an anginose difficulty which occurred towards the close of several cases of typhoid fever. From the latter part of the month of August to Nov. 1st., I attended ten well marked cases of the ordinary typhus of New England, and in all of them, with but one exception, I observed more or less of the anginose affection. Two of these cases appeared to me to be cut short by the intercurrence of the pharyngeal inflammation, while in one other, the only fatal case, the patient evidently succumbed to its influence. Upon inspecting the throat of this individual, (a gentleman 50 years of age,) a day or two after the first complaint of soreness of that part, I found the pharynx, tonsils, velum, &c., lined by a thick muco-purulent couch; this being removed, the mucous membrane appeared of a dark red color, and tumid; soon after, the sub-maxillary gland of the left side became enormously swollen, and in proportion to the intensity of these local difficulties, the general symptoms became alarming, pulse 130 with some irregularity, respiration hurried, and death upon the fourth day after the first decided manifestation of the anginor. I consider it important to mention, that I made in this case an examination of the abdominal viscera after death, and that the lesions found were identical with those described by the French writers as occurring in typhoid fever. The ulcerations of the agminated follicles were numerous and deep, some of them extending to the muscular coat of the intestine; the mesenteric glands were enlarged and softened, their section presenting a dark purple color; the spleen was enlarged and softened to such a degree, that it could be literally *stirred up* with the finger. This examination was made in presence of Dr. Benedict, of Skaneateles, N. Y., a relative of the deceased, and I am thus particular in mentioning it, since Dr. Shipman observed a febrile disease very similar in its symptoms, which preceded the epidemic in

the central part of New-York. He remarks, that the fever was "attended with diarrhœa, smooth red tongue with tympanitis, terminating fatally in a great proportion of the cases;" and also adds, "of the fever mentioned above, I will merely remark that it did not differ materially from the autumnal fevers of this section of the state, excepting its being more uniformly attended with gastro-intestinal irritation and inflammation, and its liability to diarrhœa, tympanitis and death." I cannot but suspect that this fever was no other than the *typhoid affection* of Louis, the *follicular enteritis* of Cruveilhier, &c. &c., and which is as much endemic to the north-eastern section of the United States, as it is to Paris.

About the middle of November, 1847, the epidemic may be considered as commencing in the form of a severe angina. The third case which I saw, that of an old lady of 81 years, proved rapidly fatal in consequence of the supervention of a bronchitis. A few days after this occurrence three cases presented themselves with external erysipelas. One had suffered a week previous from severe sore throat. The erysipelas was preceded in another by chills, fever, and a tenderness of the sub-maxillary glands, for a period of only 36 hours. The erysipelatous eruption was upon the face in the three cases. At the same time, a man of about 30 years of age, a son-in-law of the old lady who had died, was seized in the night with a violent chill, succeeded by acute pains in the limbs, particularly at the knee joints, rachialgia, headache, and febrile reaction. After a continuance of the febrile symptoms a period of 36 hours, the characteristic angina made its appearance. In twenty-four hours more he complained of intense pain in the left side, afterwards in the right, and died collapsed at the commencement of the seventh day of his disease. I made an examination of the thoracic and abdominal viscera. The right lung was adherent to the thoracic wall by means of loose pseudo-membranous adhesions, apparently the product of the costal sheet, which presented a general redness intermingled with arborisations, while the visceral pleura, after the removal of the pseudo-membranous productions, appeared nearly normal. Upon the left side there were no adhesions, but an effusion of a sanguineous serum to the amount of eight ounces, and the visceral serous membrane was of a dark red throughout its whole extent. The lungs on both sides were crepitant, and were evidently very little altered from the natural condition. *Abdominal cavity.* —The left lobe of the liver was very much hypertrophied. This was a chronic difficulty under which the patient had labored for several years. The section of the liver presented nothing unusual. The alimentary canal was very little changed from the normal state. The follicular patches, however, were preternaturally developed for two or three feet above the ileo-cœcal valve, and as is usual in all developments of this kind, the nearer the termination of the ileum, the greater the change. At a distance of thirty inches from the valve, the patches were slightly raised above the surrounding mucous membrane, and of a rose color. As I approached the valve, they were more prominent and studded with dark points, but none were in a state of ulceration. The spleen was of its natural size and consistence. The mesenteric glands were healthy.

From the period of the occurrence of these cases, up to the middle of March, 1848, the disease continued with nearly equal virulence.

Since this time no cases of importance have occurred, and the districts in which the epidemic prevailed have been ordinarily healthy.

Symptoms. Very great uniformity existed in the premonitory symptoms of this disease. Languor, chilliness, headache, neuralgic pains in different parts of the body, more particularly in the occipital region and about the temples, succeeded by febrile reaction, were the constant symptoms which preceded the outbreak of the various local inflammations. The duration of the prodromus varied from twenty-four hours to several days or even weeks. The pain in the back of the neck and about the temples I looked upon as pathognomonic, but considered it merely a reflection of the incipient irritation and inflammation of the throat. The functions of the stomach and bowels were not so seriously impaired, except in malignant cases, during the first stage of the disease; for although the tongue was slightly coated and some nausea, yet there was not a total disrelish for food, and the fecal evacuations were nearly normal. In the worst forms, however, of the malady, there was complete anorexia and vomiting the first day, the tongue soon became dry and brown, with dark sordes upon the teeth, and a slight tendency to diarrhœa. The urinary secretion was uniformly very much changed in quality and deficient in quantity. In one instance it resembled an unsettled decoction of coffee, and immediately threw down a brown deposite in considerable quantity. Generally it was of a brownish red color, and, as the patients expressed it, was *very thick*. This appearance of the urine was common even in the milder cases. The skin was generally hot and dry, but in some instances, especially in the puerperal cases, it was soon bathed in a profuse perspiration. Rarely it presented a jaundiced appearance. The frequency of the pulse was one of the most remarkable features of the disease. I have found it as high as 120 or 130 during the first forty-eight hours, and yet the patient would be sitting in a chair, and perhaps consider himself but little indisposed. It was small and easily compressible, indicating more a pulse of irritation than of inflammation. Sooner or later, inflammations of the different tissues of the body were developed, and upon the locality of these depended, in a great measure, the issue of the case. I have said, *inflammation of the different tissues*, perhaps I should say, inflammations of *the same tissue in different parts*, for I have almost adopted the hypothetical notion, that the primary seat of true erysipelatous inflammation is uniformly in the areolar structure. A very constant, and I am disposed to think, a uniform seat of inflammation in this disease, was the throat: for although some patients were wholly unaware of any anginose difficulty, yet upon inspection of the parts, more or less discoloration was always perceptible. All the mucous surfaces of the posterior fauces were affected, but presented different appearances in different individuals. In some there was a general deep red color of the mucous membrane, without ulceration. This redness was occasionally in patches, giving to the parts a mottled appearance, and in the majority of the cases, the deep red color of the mucous surfaces became soon changed by a sparse purulent secretion, giving to them a yellowish cast intermingled with red. I have seen the pharynx, in a few instances, completely covered with a layer of pus so thick as to blot out entirely the redness of the part. In others, the angina commenced with small circular ulcers, and sometimes pustules upon the tonsils and pharynx, evidently of follicular origin, and

the redness of the mucous membrane was less marked, or nearly wanting. Rarely I have seen the whole throat unusually pale, tumid and semi-transparent, appearing as if œdematous. In all cases, without exception, there was more or less tenderness and swelling of either the sub-maxillary, parotid, or lymphatic glands of the neck, as well as of the tonsils, and the uvula was almost as universally elongated; but I did not observe more than once or twice, the drop upon its point, mentioned by Dr. Peebles as so characteristic of the affection as it occurred in Virginia.

The erysipelatous efflorescence occurred in one-sixth of the cases. When it occupied the face, it was of a livid appearance, and was soon covered with large irregular bullæ, filled with serum of a slight yellow tinge. The inflammation involved both the dermoid and sub-cutaneous cellular tissues, and small abscesses occurred in various parts, more particularly, however, about the eyes in the textures of the superior and inferior palpebrae. In one case, a circular gangrenous eschar was formed at the internal angle of each eye, in the superior eyelid. In two instances, the erysipelas of the face was of an œdematous character, and occupied only the parts bordering upon the eyes. While the cutaneous efflorescence was progressing, the patients complained very little of the disease of the throat, but I became satisfied, by inspecting the parts, that it was not in consequence of the resolution of the angina, but upon the principle involved in the axiom, *duobus doloribus*, &c. Where the case progressed to a favorable termination, an abundant desquamation took place from the diseased cutaneous surfaces. In some instances, which commenced with the usual anginose symptoms, no external efflorescence occurred, but the cellular tissues in the axilla and beneath the pectoral muscle became the seat of inflammation, and enormous abscesses were the result. An old lady of 65 years had suffered for a few days with general febrile symptoms of little violence; upon visiting her in the morning, she complained to me of pain in the right fore-arm; I observed that it was somewhat swollen, but without discoloration; in eighteen hours the arm was gangrenous from the wrist to the shoulder, and death closed the scene. The rapidity of the gangrenous termination in this case, is unparalleled in the history of the epidemic as it occurred in this town, but was not the only instance of such termination. The other example of this character commenced with severe febrile symptoms, pulse 130 at my first visit, and an erysipelatous efflorescence covering nearly the whole of the internal part of the thigh. Several small gangrenous eschars were soon formed, which sloughed out, leaving ill-looking ulcers with abrupt edges, their bases formed apparently of dead cellular membrane. About the sixth day, there was a temporary abatement in the symptoms; the pulse fell to 80, the erysipelas faded, and I began to hope that the worst was told. In 24 hours from this time, I perceived the diseased limb was more swollen, a slight cutaneous blush accompanying the tumefaction, and another day disclosed a gangrenous strip, about three inches in width, upon the outer part of the thigh, extending from the head of the femur nearly to the knee. The result was inevitable. The patient died upon the tenth day of his disease, his limb already in a horrible state of putrefaction.

One of the most remarkable cases, and one which I think worthy to be given in detail, was that of my friend Dr. M. A. Shepard, who had just returned home from an attendance on lectures in New Haven. On

Saturday, February 19th, he visited, in company with myself, two very malignant cases of the epidemic disease. The next day he was seized with the usual pyrexial symptoms, attended with severe pain in the right axillary region. At my first visit, which was the day following the attack, I found him complaining bitterly of this local difficulty, which was increased by the least motion of the arm or shoulder. The parts were very tender to pressure, but no discoloration or perceptible tumefaction. I suspected the commencement of cellular inflammation, and intimated to the patient that he would probably have a pectoral abscess. I hoped for this termination, as in the four cases which I had already seen, the issue was favorable. My expectations in this respect were disappointed. Instead of suppuration beneath the pectoral muscle, the cellular inflammation extended rapidly over nearly the whole trunk, with occasional red patches upon the skin. The extension of the areolar inflammation occupied a period of about six days, and during this time the pulse never rose above 90, and the symptoms upon the part of the digestive apparatus were by no means alarming. The intelligence, however, became rather obtuse, with some incoherence; the face and conjunctiva slightly jaundiced; the urine did not exceed one ounce per day, and appeared, upon its first emission, like unsettled coffee. The throat presented the usual erysipelatous redness, but no remarkable tumefaction. At the commencement of the ninth day of his disease, the patient called my attention to a slight swelling of the tip of the tongue. In a few hours the swelling had increased to such an extent that the tongue could not be protruded from the mouth. It required but a few hours longer to produce such extensive mischief, as to completely suspend respiration, either by the encroachment of the tumefied parts upon the larynx, or by œdema of the glottis itself. He died at the commencement of the tenth day of his disease. This case presented the most extensive diffuse cellular inflammation of any which occurred during the epidemic, and was the only one accompanied with swelling of the tongue.

The following tables will serve to conclude the enumeration of the local manifestations of the disease, and also to exhibit its mortality and duration.

TABLE OF CASES WHICH PROVED FATAL.

No. of cases.	Local Manifestations of the Disease.	Age.	Sex.	Duration of disease.
1	Angina, with erysipelas of the face, and symptoms of meningitis with effusion.	34	fem.	20 days.
1	Angina, with erysipelas of the face and arm.	72	male	13 "
1	Angina, with erysipelas of face, together with symptoms of meningitis and pleuritis.	17	fem.	7 "
1	Angina, with pleuritis.	30	male	7 "
2	Angina, with bronchitis.	81 &70	fem.	2 & 6 "
2	Angina, with peritonitis or muco-peritonitis.	18 &32	fem.	7 & 4 "
1	Angina, with diffuse cellular inflammation of the leg and symptoms of pleuritis.	76	male	5 "
1	Gangrene of the arm.	65	fem.	4 "
1	Diffuse cellular inflam. of the leg and thigh terminating in gangrene.	32	male	10 "
1	Diffuse cellular influx of the whole trunk, with enormous swelling of the tongue.	35	male	10 "
2	Puerperal peritonitis.	19 &21	male	4 & 5 "
14	Total.			

TABLE OF CASES WHICH RECOVERED.

No. of cases	Local Lesions.
5	Angina, with erysipelas of the face.
4	Angina, with pectoral abscess.
1	Erysipelas of the neck, with enormous glandular engorgement, and suppuration.
1	Angina, with similar glandular engorgement, terminating in resolution.
1	Erysipelas of the leg.
1	Puerperal peritonitis.
46	Angina, with pyrexial symptoms of greater or less intensity, actually requiring treatment.
59	Total.

The ages of the patients included in this table varied from 8 to 75 years, and the duration of the disease varied from three days to as many months, the milder cases of angina occupying the one extreme, and the cases of pectoral abscess the other.

It will be observed from these tables, that the serous membranes were a frequent seat of disease, especially the pleura and peritoneum. I have included but three cases of puerperal peritonitis in the list. One other case occurred in a woman whom I attended at her accouchement, but who fell into the hands of an empiric after the attack of peritonitis. She died. These four puerperal cases were the only ones of the kind out of 21 females confined during the epidemic, all of which I attended. As the relative proportion of similar cases has not been given, in the various accounts of other epidemics of the same nature, I have no positive means of knowing whether this number is comparatively greater or less. Let this be as it may, it does not, to my mind, speak very strongly in favor of the doctrine of contagion from the hand and clothes of the practitioner. I have also a strong reason for doubting this view, in the fact that my own wife was confined during the height of the epidemic, when I was daily and hourly in contact with severe cases of erysipelatous disease, and yet she suffered no untoward symptom subsequent to delivery.

There was a very manifest difference between the symptoms in the cases of *puerperal* peritonitis and those which occurred independent of this condition. In the former there was much less abdominal pain and tenderness, little vomiting or diarrhœa, an extremely rapid pulse (130 to 160), and a very intense frontal headache, from the commencement of the attack; while in the latter, the pain in the abdomen was severe, with constant vomiting and diarrhœa, tympanism, cold extremities, a small, frequent pulse, and death in from 48 to 72 hours after the first symptoms of serous or muco-serous inflammation. I am disposed to consider the inflammation in these cases, as involving both the mucous and serous membranes, for they seemed to combine the symptoms of peritonitis with those of cholera morbus.

Etiology.—However numerous the speculations in reference to the causes of epidemics, science has been yet unable to penetrate their mysteries. I may be allowed to assert, however, that the influences which produce these diseases are not simultaneous with the first outbreak of the epidemic. They precede it for a longer or shorter period,

and thus insidiously prepare the human constitution for the development of the morbid changes which are to follow; or, in other words, they establish an epidemic diathesis previous to the commencement of the work of death. It is not unusual that a fatal epidemic is preceded by one of milder form, or that there is a greater amount in a modified or aggravated form, of the ordinary diseases of the locality in which it is about to prevail, thus giving evidence that preparation is making for the onset. In the present instance, I have no doubt that the typhoid fever, accompanied uniformly with anginose symptoms, was the foreshadowing of the epidemic; but what were the anti-hygiène influences in operation, I am wholly unable to surmise. The season presented nothing unusual—no extraordinary atmospheric phenomenon, and no tangible evidences of morbific effluvia. I have no new hypothetical views to offer upon this point, and believe that a long-continued series of correct observations, made with reference to atmospheric changes, deterioration, density, electrical condition, together with an examination into the dietetics and general regimen of the infected population, is the only method of investigation likely to reveal the arcana of epidemics.

The question of contagion is an important one, and deserves a rigid investigation. In the epidemic now under consideration, the evidence was very strongly in favor of its contagious nature. The first case which occurred was that of a gentleman, at whose house the old lady was visiting who died a few days after. The next fatal case was that of her son-in-law, who was in constant attendance upon her during her illness. Three other cases, all of the anginose character, occurred in the same family immediately after. An old gentleman of 72 years, died of erysipelas, and three of his children contracted the disease. These were also in the anginose form, and two of them very severe. Two ladies from a healthy district went some distance to watch with an acquaintance suffering from erysipelas of the face: they returned home, and upon the third day after, were both seized with the usual symptoms of the epidemic. The gentleman who died with a gangrenous leg, was a member of a secret society, and was attended by his brethren as watchers: one of these from a perfectly healthy, and two from the infected district, were soon after seized with the disease. It would be useless to enumerate all the circumstances of this character. The evidence in favor of contagion was certainly startling, and popular opinion became fixed in that direction. I could not but incline to the same view, with certain restrictions. Large numbers of those who attended upon the sick entirely escaped the disease; and the natural inference is, that a participation in the epidemic diathesis was a necessary predisposing cause in those persons who did contract the disease from contact with others. The evidence of fomitic contagion with reference to the puerperal cases, I have given in another part of this paper. It is certainly very meagre, and I may here remark, that upon a question of such moment, the most unqualified proof should be adduced, previous to adopting an opinion so repugnant to the feelings of the accoucheur, and so alarming to the community.

Treatment.—The treatment of the cases which fell into my hands was conducted upon general principles, and according to the circumstances of the case. In those of an anginose character, unaccom-

panied with any other local inflammations, my success was uniform, and unattended with the loss of a single patient. My treatment of these cases was also very uniform, consisting, in the first place, of an emetico-cathartic, the formula of which I think proper to give. It is simply the ordinary emetic solution of tart. ant. et pot., to be taken every half-hour until emesis is produced, in connection with a strong decoction of eupatorium, the latter to be drank freely during the intervals of taking the antimonial solution. This method of giving these medicines scarcely failed in a single instance to produce an emetico-cathartic effect, and to afford at least temporary relief to the patient. Vesications upon the neck, with emp. canth. was the remedy next in order, and many times acted like a charm in relieving the excessive soreness of the throat. Frequently I applied, also, a strong solution of nitrate of silver, directly to the inflamed mucous surfaces. This constituted the principal part of the treatment in a majority of the anginose cases; but in some, in which there was a continuance of the fever after the abatement of the local difficulty, I administered freely an infusion of bark, with evident advantage. In the more malignant cases, accompanied with the erysipelatous eruption and diffuse cellular inflammation, I also mainly depended upon bark, with an infusion of serpentaria and mild laxatives during the first stages, and afterwards upon the more powerful stimulants, such as ammonia, wine, brandy, etc. In short, although frequently perturbative at the onset, my treatment was in the main decidedly tonic and stimulating; and it was only in the cases of serous inflammation that I departed from this plan. In these I used calomel and opium largely, but without success, except in one case of puerperal peritonitis. In this I have no doubt, that the free use of the mercurial, combined with opium and digitalis, saved the patient. With reference to the external applications to the erysipelas, I at first made use of my favorite remedy, namely, arg. nit. in strong solution; but perceiving no benefit whatever, I abandoned all external remedies, with the exception of cooling lotions to allay the heat and smarting of the inflamed parts. In the case of glandular engorgement of the neck, which I succeeded in resolving, I administered bark internally, applied the vesicatory to the tumor, and afterwards rubbed it freely with ung. iod. pot.

Translation and Notice of articles from "Zeitschrift für die gesammte Medicin," etc., herausgegeben von Dr. F. W. Oppenheim, in Hamburg, Germany. Band 28, Heft 1, p. 1. By T. A. Kellkamph, M. D., New-York.

ART. IV.—*Remarks on the Effects on the Mind and on the Intellectual Faculties of some Medicines.* By DR. WEBER, of Hanover, Germany.

THIS article has been called forth by an essay on the same subject by professor Otto, published in that Journal, with the object of directing the attention of medical men to the effects of certain medicines on the mind. Dr. W. contends, that a sufficient number of facts were to be found in our literature on this subject, and that they would prove highly useful in the treatment of diseases, if judiciously chosen and if their indications were particularized. To accomplish a part of this task is

the main object of his communication. After having spoken about the summary manner in which Prof. O. had treated on some medicines—Musk, Castoreum, Wine, Æther, Ammonia and its preparations, in regard to which he (Prof. O.) had made the general remark that they increased the imagination and "the reasoning powers"—he enters upon a discussion on the course to be pursued in making the necessary experiments with medicines to learn their relation towards the different organs of the body and their effects upon the mind. Of his account of the effects of some medicines we give the following extracts:

The first effects of musk, (direct or positive,) according to Joerg's observations, are: Absent-mindedness, disturbed power of reasoning, inability for mental occupation, confusion of ideas; afterwards giddiness and heaviness. Other observers, as: Cartheuser, Tralles, Kranz, Fr. Hoffman, add, that it also produces headache, fainting, sleepiness, irritability and fear. The secondary (re-actionary) effects of the medicine in the healthy subject, resulting from the conflict of the vital forces, (healing power of nature,) are directly the reverse of the first. In a body suffering under disease, the vital power re-acts against the disease; health is thereby either restored or not; in the latter case, the medicine employed produces, according to the design of the physician, in the diseased system or organ or in other distant organs, (according to the laws of antagonism,) new relations and effects, which necessarily are followed by a re-action; this is called the healing effect of medicines. He is of opinion, that on this, all knowledge of medicine depends. From the above statement he infers that Prof. O., in stating the effects of musk, castoreum, ammonia, etc., had mistaken the healing for the first effects.

Without discussing the merits of the preceding remarks of Dr. W., we proceed to make some extracts respecting the effects of medicines, which are perhaps new to some readers.

Of castoreum, he continues, our knowledge as to its effects is so uncertain, that we might say of it, as Hebel does with regard to comets, of comets we could say a great deal, because "we know very little about them."

The observations respecting carbonate of ammonia are numerous. Wilmer, Schreter and others enumerate the following as its (first) effects on the mind: seriousness, disposition to weep, with thoughts of death, melancholy, sadness; in the afternoon fear, as if one had committed a crime, sighing; supernatural fear, restlessness, irritability, forgetfulness, absent-mindedness when narrating, passes easily from one thought or idea to another, which he utters contrary to his will; drowsiness, heaviness in the head, etc.

He infers, that consequently the circumstances under which musk would produce a healing effect on a diseased mind, were very different from those under which a similar effect of ammonia could be expected.

Phosphorus is ranked among certain medicines which are considered peculiar in their first effects, producing in different cases effects reversed to each other; veratrum album and nux vomica, for instance, produce sometimes costiveness, at others diarrhoea; opium sometimes produces sleepiness, comatose sleep, sometimes sleeplessness; cures a diarrhœa in consequence of fright, cold, etc.; and on the other hand, it is the appropriate, sometimes the only efficient remedy against costive-

ness, delirium tremens, passio iliaca, ignatio amara; wine, etc., belong also to this class.

The effects of phosphorus are stated to be by Lobstein, Bouttaz, Le Roi and others, extraordinary excitement of the generative organs, irresistible desire for coition; by others, want of erections, total impotence, aversion to coition. It can be explained accordingly, as the author thinks, why phosphorus was recommended and found effective in cases of diseases of the genital organs, very dissimilar to each other. The remarks on phosphorus are concluded with the statement of the known result of all observations on the efficacy of this medicine, that it rarely proved beneficial in cases characterized by want of desire for copulation, with debility of the sexual organs.

Iodine. After having mentioned its abuse, its deleterious effects on the body, illustrated by innumerable cases; Richter, Joerg, Gairdner, Küntzli, etc., are quoted, who have observed its effects upon the mind, to be a *peculiar* despondency, together with fear, anguish, care, sadness, continual disposition to weep, (Perrot,) great aversion to serious mental occupation, etc. Finally, he speaks of the known, sometimes fearful effects of *cantharides* on the sexual organs, their abuses, but more especially on their effects on the mind, with particular reference to their efficacy in cases of hydrophobia, as well to prevent as to cure an attack of that disease.

Prust's observations are quoted: that during a period of eighteen years no individual, bitten by a mad dog, was affected with hydrophobia after a prophylactic treatment with cantharides. They are confirmed by Axter, physician to the general hospital in Vienna, who treated for thirty years all patients bitten by rabid animals and received in the hospital; he cured three patients after the first characteristic symptoms of hydrophobia had set in. Prust also cured a case by this medicine. How does it happen, Dr. W. asks, that at present, after such favorable results in the treatment of hydrophobia of distinguished observers, known for their acuteness, hardly one patient dies less of this fatal disease, than one hundred years ago? He explains this fact by the inconsiderate use made of a number of medicines, highly praised at a time, but soon as ineffectual abandoned, and by a want of individualizing of cases. Cantharides are no specific remedy in all cases of hydrophobia, and therefore other remedies were sought for; there are cases where belladonna, and others where stramonium answer all indications better than cantharides.

The healing effects of cantharides are explained by its first effects on the healthy system, which are enumerated as resembling the symptoms of hydrophobia, according to Wendt, Graaf, Orfila, Biett, Horn, Jahr, Giulo and others. In regard to the dose of cantharides, he recommends, in conclusion, to begin with *small* doses, (instead of combining larger doses with camphor, the most certain antidote to cantharides,) because, referring to Giulo's observations, a few drops of the tr. cantharides are sufficient to produce sometimes a fearful irritation and great changes in the system; and that in this respect, as in all cases, the constitution, the irritability of the nervous system, the severity of the case, etc., have to decide. This article contains a good selection of reliable observations, but the views on the effects of medicine expressed in it, add, in this respect, nothing to our knowledge in therapeutics.

A course of experimental investigation, corresponding to that pursued in other branches of the natural and medical sciences, upon which their rapid progress has been dependant, was of late adopted also in therapeutics, and a sound foundation has already been laid by tracing the material changes, and by numerous discoveries in regard to the physiological re-action *peculiar* to the different parts of the body in their healthy and diseased state, produced by irritamentia.

We cannot wonder that therapeutics, as a branch of medicine, dependant upon others, viz: physiology, pathology, pathological anatomy etc., were comparatively little cultivated; but well may we be surprised, that at present the views expressed in the article under consideration are not more comprehensive, and that a course of investigation, respecting the efficacy of medicines, is recommended, promising but partial results, and which cannot lead to correct general views.

From the same Journal, B. 28, Heft 1, No. 2.

ART. V.—*The Hospitals for Syphilitic Patients in Paris, and the Medical Treatment in the same.* By G. S. BOENECK, of Altona, Germany.

THIS article contains, in its beginning, some historical facts not generally known, which prove how great the dread of syphilis was in France when it first became known there, in 1495, and which aid at the same time to explain how it was, that this dreaded disease (besides its more contagious character at that time) spread in a comparatively short time over the different continents. No measures were taken any where to check the progress of the disease; no hospitals were opened for the reception and treatment of syphilitic patients. The measures taken had the very opposite effect of what was contemplated. It was decreed by parliament, "that all affected with syphilis should return to their places of residence, and that they were not to return from thence, or to leave their places of refuge, under penalty of death."

The patients were sent to the so-called "petites maisons," and at a later period they were received into the Bicêtre, and into the Salpetrière. Half of them slept, four in one bed, from 8 o'clock P. M. to 1 o'clock A. M.; the other half, from 1 to 7 o'clock, A. M. The wooden cells or boxes in which they were placed, were without windows, and not ventilated, and the patients had to wait from six to twelve months before they were medically attended to.

During the reign of Louis XVI. great improvements took place in the state of affairs, but more important changes were effected in this respect in the course of this century.*

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* In a comparatively new country like the United States, where medical and other public and private institutions have been established in quick succession, for the benefit of the poor, by state governments or by the efforts of private citizens, it is no matter of surprise, that little or nothing has been done for syphilitic patients, who, as yet, have not been considered as fit subjects for hospitals. But after what has been accomplished for the improvement of the condition of the sick and infirm, it is time that—as a measure of medical police—hospitals, or at least sections of them, should be opened for the reception and treatment of syphilitic patients. For, if not before long such measures should be taken for this class of patients, syphilis—by no means a rare disease in the larger cities of the United States—will spread to such an extent as to leave no more a doubt about the necessity of their adoption.

A few suggestions which presented themselves while we were reading this article, will not be regarded, we hope, out of place here.

In the second part of the article some statistical facts are communicated respecting the two principal hospitals for syphilitic patients in Paris.

Hôpital des Vénériens, or, du Midi ; Faubourg, St. Jaques. Since 1828 men only are received. It contains 400 beds. 1837, 1 patient died of 203 ; the average time of duration of treatment, 38 days ; the number of patients treated in the hospital amounted, in 1837, to 3,376; in 1840, to 3,730. Among the physicians of this institution, Ricord is distinguished both for his genius and his joviality (good humor ?).

Hôpital de Loureine (Rue de Loureine), destined for the reception of syphilitic women, those excepted who fall, as prostitutes, under the jurisdiction of the police. The latter are sent to St. Lazare. In the Hôpital de Loureine are treated besides, women suffering under chronic scrophulosis, which, in some of its forms, resembles syphilitic affections. Hugier and Cruveiller are its principal physicians. In 1840, 2,083 were treated in this institution ; average mortality, 1 in 50 ; average duration of treatment, 50 days. The treatment in both hospitals is very similar.

The last part of the article, in which Ricord's views on the different forms of gonorrhœa, and of chancres, and on inoculation, are communicated in a clear and short way, together with a synopsis of his favorite medicines—does not allow of an extract.

In regard to inoculation, recommended by Ricord, the remark may find here a place, that his views on that subject have not been adopted beyond his personal sphere, because the expectations raised at one time as to the practical importance of inoculation for the diagnosis and treatment of syphilis, have not been realized.

Dr. Theo. Tellkampf.

From the same Journal, B. 28, Heft 2, No. 3.

Art. VI.—*Observations upon certain Remedies against Hooping Cough.* By E. A. Pank, *Physician to the Alexandrian Orphan Asylum in Moscow.*

Assafœtida, recommended by Kopp during the convulsive stage of hooping cough as the best remedy, employed in several epidemics, had in a number of cases in Moscow, no other effect than to lessen the cough and to make the paroxysms less seldom, without shortening the duration of the disease.

Muriatic acid was first employed, and justly praised as a valuable remedy against hooping cough, by Dr. Thiel. The author found it to be particularly beneficial, when, after the inflammatory stage of the disease was over, each paroxysm ended with throwing up a considerable quantity of a white fluid, resembling white-bread dissolved in milk or water; in cases, therefore, where the functions of the mucous membrane of the stomach are morbidly changed, he prescribed a table-spoonful every hour of the following mixture : ℞. Acid mur. ʒ ij ; Aq. distil. ℥ vj ; Syr. simpl. ʒ ij ; but regrets, with Dr. T., that it could not be given safely to infants in a sufficient quantity to effect a cure.

In the treatment of *complicated cases* are recommended : 1*st. Calomel*, if convulsions supervene or inflammations requiring its use ;

2d. *Ol. Jecocaselli*, if the children are of scrofulous diathesis. Histories of various cases are given, all of which tend to establish its beneficial effect in the treatment of hooping cough; 3d. *Chin. sulph.* if the patient should suffer from intermittent fever (one case).

The author dissuades, on the other hand, from the use of belladonna; which he never employed in the treatment of hooping cough, considering it as too dangerous a remedy. Flor. zinci, musk, ipec., etc., he deems preferable, should the spasms become excessive; but the relief produced by narcotics, he adds, is merely a temporal one. He draws the conclusions that experience had shown, that a specific remedy against hooping cough did not, and could not exist, and that the treatment ought to be adapted to each individual case.

In an appendix to the article, some observations are communicated in regard to the efficacy of tannin in the convulsive stage, highly recommended by Dr. Tucks and others. It was employed with sugar in the form of powders; half a grain per dose four times a day, and used for a month and longer in succession.

Of ten patients, aged from 9 to 11 years, generally of a healthy constitution, one girl was cured in a remarkably short time, but the others recovered no sooner than they would have done under another course of treatment. In four cases the use of other remedies became necessary to effect a cure.

A light diet without meat for the first few weeks contributed evidently to shorten the disease.

Dr. Theo. Tellkampf.

Art. VII.—DR. TRENOR AND AMALGAM.

BY THOMAS E. BOND, M. D., OF BALTIMORE.

Editors of N. Y. Journal of Medicine and the Collateral Sciences.

Gentlemen,—I have lately seen a number of the Dental Intelligencer, which contains an article copied from your Journal, entitled "Observations on Amalgam, with cases, by John Trenor, M. D., Dentist—which is concluded in the following words: "Let it be borne in mind, that the foregoing remarks and cases are placed before the profession, not so much from a confidence in their intrinsic value, as with the hope that they will elicit further investigation and discussion, which, it will be readily admitted, are the main springs to improvement."

We are to understand then that Dr. Trenor does not consider his cases to be so positive, and the inferences he has drawn from them so logical, as to be entirely conclusive. He is somewhat doubtful of their "intrinsic value," or else he could have nothing to expect from that "further investigation and discussion which he hopes to elicit." We therefore need make no apology for noticing his article, since we are thereby, in our humble way, doing what we can to fulfil his "hope."

The public are very much interested in the settlement of this "Amalgam" controversy. If the article in question be the hurtful thing which many dentists declare it to be, then it is of great importance that its noxious qualities be so generally known as to prevent any further suffering from its use. If, on the other hand, as many other dentists assert it to be, an innocent article, it is almost equally important that its use be no longer impeded. The controversy, for the most part, has

consisted in alternate and conflicting statements of observations made by dentists professing opposite opinions upon the subject in question: on the one hand, recording numerous cases of serious injury from the use of "Amalgam;" on the other, offering a negative testimony to the contrary of those positive assertions, or even, as in the instance of Dr. Trenor, endeavoring to show that great harm has been done by removing the article from teeth in which it had been inserted. A discussion of such a character as this is necessarily interminable. The 'cases' are the witnesses, and these are never brought into court. The details are given by the party whose views they are intended to support; no opportunity is afforded for cross-examination; and as it is very possible that the prejudiced observer may have omitted to perceive important circumstances, exaggerated others, and although himself honest, entirely misrepresented the whole, it is evident that no statement can be, *per se*, positively decisive. Were I to decide to-day upon the testimony of the most positive character, that Amalgam is pernicious, there is no certainty that a counter-statement appearing to-morrow may not once more unsettle my faith. Were I to show most conclusively that the facts recorded by Dr. Trenor are at the best equivocal in the evidence they give, and that his inferences are not logically drawn from them, I should only do a partial service to truth; for Dr. Trenor or some other gentleman might immediately advance other facts and other inferences, which in their turn must be examined, and this process may proceed until both parties shall be wearied, but neither convinced.

It is not my purpose in this article to confine myself to the examination of any one witness, but to present to the reader the few simple yet cogent reasons which fully satisfy me of the deleterious character of this Amalgam, when used for filling teeth.

In the first place, it is not necessary that the question shall be decided upon by the merits of the reports of cases pro and con. Such a mode of determination is reasonable enough, but very difficult; and moreover, although it may afford certain conclusions to the unprejudiced, it carries with it no controlling power over the reluctant minds of partisan opponents. Decision here must be by fair comparison and just inference; but thus to compare and thus to infer, requires sound judgment and the unprejudiced use of it; and experience teaches us not to suppose that all men, or even most men, possess the quality or condition of mind required.

Were there, however, no other way to truth in the premises, I think that an unprejudiced man, after examining the conflicting opinions of dentists, would speedily and certainly decide the question against "Amalgams." Let the state of the controversy be fairly exhibited: On the one hand, a very large number of the most respectable dentists formally agree and declare that abundant individual experience, drawn from a large number and great variety of observations, has fully convinced them that "Amalgam" is often a noxious article, both to the tooth in which it may be inserted, to the parts adjacent and contiguous, and to the general health of the subject; and so firmly are they convinced of this, that they refuse to acknowledge as correct practitioners any who continue to use the article denounced.

Now it gives great force to any testimony, that its tendency is against the interests of the witness. For unless a man be insane, he will not say anything falsely or unnecessarily to injure himself; and

moreover, as all men are supposed to have their interests continually in view, it is admitted that all are predisposed in favor of such opinions as are manifestly most likely to lead to advantageous consequences to themselves. This predisposition is a strong opponent of undesirable truth, and when it is overcome and the man convinced both against his will and interests, this fact affords strong evidence, both of the honesty of the testimony and the force of the reasons which have compelled the decision. It is true that in the case of a solitary witness the circumstances might not be conclusive of the correctness of his opinions, though they would be of the honesty of his purpose. One man might be insane or over-credulous, or defective in judgment; but where similar evidence is given by a hundred men, and these, too, men who of all others have had the best opportunities for investigating the truth, and who must be considered, from their professional habits and character, capable of observing such facts as they have stated, then the evidence is irresistible, and no opposing testimony short of the proof of sinister purpose and foul conspiracy can shake it.

Should others declare that they have not made similar observations, the assertion, however true, would be a mere negation, which could have no weight in a case where positive contrary testimony is offered.

The American Society of Dental Surgeons stands before the bar of public opinion, to testify against their own individual interests. Were "Amalgam" what its friends suppose, it would be as precious to the gentlemen composing this Society as to other dentists. It would increase their business, diminish their labor, and so lessen to them the cost of operations, as to save to them a very large amount of money. They are, therefore, honest; and inasmuch as their natural regard to their own interest has been subdued by the force of arguments, those arguments must have been very cogent, not to have been withstood by reason or selfishness. Again: they certainly have had good opportunities to observe the effects of "Amalgam fillings," and as they are known to be men of intelligence, it cannot be supposed that they are incapable of making the necessary observations. Whatever objection may be made to the value of the testimony of any one of these men, the aggregate worth is indisputable.

On the other hand, a number of individuals testify that they have not seen the evil effects which others have attributed to Amalgams; or, if they have seen cases similar to those adduced by some of the anti-amalgam party, they trace the consequences to other causes.

It is a material fact with regard to this evidence, that the parties who appear for the defence are, a few dentists of good reputation, and—all the quacks in the country. We would therefore naturally be inclined to examine their testimony very closely; for though empirics may be right, they are not very likely to be so. There is, however, respectability enough in Dr. Trenor, and some others of the party, to serve as salt for the rest, and therefore we will make no special objection to them.

In view of the remarks made previously we must remember, that if evidence contrary to interest be strong, testimony in favor of interest is proportionably weak; and if the fact of the first make the accumulated positive evidence of capable men irresistible, the fact of the second begets a doubt which merely negative evidence, always weak, cannot by any means dispel.

Nor is it sufficient to show that any one of the witnesses against

Amalgam, has been mistaken in any particular cases, in attributing certain appearances to a certain cause. Could Dr. Trenor show this, and he has not shown it, it would create a suspicion of the soundness of the judgment of the single man. It would not even destroy the validity of his whole testimony, since, though mistaken here, it would not follow that all his observations have been similarly unsound. The defence has to do with the whole accumulated mass of evidence, and nothing short of proving evil purpose and malign confederation can shake the testimony.

I have stated previously, that the decision of this question does not depend upon the inference to be drawn from conflicting observations. It may readily be settled by an appeal to science.

'Amalgam' is composed of mercury and silver, in chemical union—were the mercury set free, and were it acted upon by the fluids of the mouth, or were it carried into the stomach, then all the evils would ensue which have been attributed to it. It follows, therefore, that the whole question turns upon the capability of the several matters with which Amalgam may meet in the mouth, to act chemically upon it. Can they so act upon it? At first I should have supposed that none would dispute the affirmative. But it is disputed, and Dr. Trenor disputes it.

I am pleased, that it is not necessary for me to examine Dr. Trenor's chemical opinions very closely. As they are, so far as I know, entirely peculiar to himself, and never before communicated to the public; as none of the chemists seem to have studied his system, or to have been aware of the facts he has stated, it might be presumptuous for one who claims to possess no more than an ordinary knowledge of the science, to enter the lists with that gentleman. Fortunately we have positive evidence in the matter, and the man who adduces facts must always have the advantage of the man who suggests probabilities. Dr. Trenor says, that Amalgam *cannot* be chemically changed in the mouth, so as to produce active mercurial agents. Now if we can show that it *has* been so changed, his argument is rendered nugatory, for it has led him to a "deductio ad absurdum," viz., to conclude, that the theory could not be which has been. As one unquestionable fact is as good as many, I will content myself with that stated in the following letter.

Mr. James R. Chilton, well known as a distinguished chemist of New York, thus writes:

New York, Nov. 13th, 1847.

E. Parmly, Esq.

Dear Sir,—In accordance with your request, I have made a chemical investigation of the various decayed teeth which you handed me, the cavities of which were more or less filled with the Amalgam of silver and mercury. These teeth presented the appearance of having been filled a long time previous to being extracted. The metallic filling of each was quite black, and in some it was of a porous or spongy texture. Upon breaking open the teeth and removing the filling, the cavities to a considerable depth were found to be greatly discolored: some being quite black, and in one it was of a dark green color which extended even to the extremity of its roots.

From the various experiments which I have made, both upon the external surface of the Amalgam found in the cavities of these teeth, and upon the discolored portions of the teeth themselves, I have no doubt that the discoloration has been produced by the decomposition of a portion of the Amalgam by

the agents with which it has come in contact in the mouth, thereby producing both oxide and sulphuret of mercury with a portion of sulphuret of silver.

The tooth, the root of which was colored green, contained oxide of copper, no doubt derived from the Amalgam, which may have been made by mixing mercury with the fillings of ordinary silver coin, which always contains a portion of copper.

Very respectfully yours,

JAMES R. CHILTON.

Unless I can be convinced that Mr. Chilton is ignorant of the elements of his art, or atrocious and mendacious, I shall certainly believe that the facts of chemistry are against the Amalgam dentists; and if chemistry be against them, I care not who is for them.

Baltimore, March 18th, 1848.

ART. VIII.—*An Essay on the Nature and Curability of Heterologous Tumors.* By N. S. DAVIS, M. D., 362 Bleecker-street, New-York.

IT is well known, that the late and extensive researches in pathology, and morbid anatomy, have resulted in the division of *Tumors* into two great classes. The first class includes those tumors whose structure bears a resemblance to, or is identical with, some one of the natural tissues of the body. These are called *Homologous*, and are mostly of a mild and non-malignant character. The second class includes all those tumors whose structure is essentially different from any of the natural structures of the human body, and hence they are called *heterologous* formations. This class includes the several varieties of carcinoma, and the tuberculous, scrofulous and typhous deposites, and are all essentially morbid in their character, passing through a regular series of changes, and terminating, when left to themselves, either in destruction of the part or the death of the patient, and sometimes both. But it constitutes no part of our present purpose to enter into a description of the microscopic appearances, or the morbid anatomy of this class of tumors. This has been done with great minuteness and accuracy by many eminent modern investigators, and from their labors we are enabled to draw two or three important conclusions. The first is, that all the *heterologous* tumors or formations, consist essentially in an accumulation or deposite of *new matter*, unlike any of the tissues of the human body. Second, That these deposites may occur in any of the tissues composing the animal system, but are much the most frequent in the cellular or æreolar, and glandular structures. And third, that they all tend to induce certain actions in the parts affected, and to undergo, sooner or later, certain changes, such as softening, conversion into pus, &c. Thus far we may regard the work as completed, the conclusions well settled; and still the diseases to which they relate, especially those of the *tuberculous* and *carcinomatous* character, constitute the chief *approbria medicorum* of the present day. Hence, practically speaking, we are very little wiser in regard to these affections than were our fathers; the early employment of the surgeon's knife being regarded as almost the only practical resource of our art, and even that, of very doubtful propriety. And if we regard the frequency of their occurrence, their protracted and painful course, and their almost uniformly fatal tendency, we shall readily agree, that humanity

does not call more loudly for the rigid and persevering investigation of the causes and curability of any one class of diseases, than this. Upon this task, therefore, we shall enter with all the patience and scrutinizing care with which nature has endowed us; and for the sake of clearness and method in our work, we shall take up the following questions, in the order in which they are stated, viz: 1st. If tuberculous and cancerous deposites are real accumulations of new matter in a normal tissue, do they arise, *ab initio*, from constitutional causes producing a morbid condition of the blood, or are they the result of a morbid action of the capillaries of the part, while the state of the blood and the constitution becomes affected only secondarily? 2d. If they arise from a primary morbid condition of the blood, what are the circumstances and conditions of the system, that give rise to such morbid condition? 3d. What is the prognosis, and the general indications of treatment?

Perhaps there is no more difficult task than that of tracing the relations of cause and effect, and of maintaining, at all times, the true order of sequence in the development of disease. And, yet, on this depends the entire value of all our conclusions. Thus in the development of a cancerous affection, we have a local mass of disease, a morbid condition of the circulating fluid, and general or constitutional symptoms; and it is plain, that the therapeutic indications will depend entirely on our conclusions in regard to the order in which these are developed. For instance, if the local affection is the first link, the primary step, then the old practice of early and complete extirpation is the only rational indication; while if the constitutional disorder is first, and the local deposite only a result, such a practice would be the merest folly. Our first question is, consequently, one of great practical importance, and requires for its proper solution an extensive review of cases, and a minute attention to their individual history. If we are not much mistaken, the prevailing opinion among the mass of the profession is, that cancerous or malignant tumors are strictly local in their commencement, and only affect the constitution secondarily. It is on this account, that most modern investigators have directed their principal attention towards the establishment of the early diagnostic marks of the disease; the ability to distinguish the nature of the tumor, and to remove it at a period anterior to its implicating the general health, being considered the point of chief practical value. We know that many of our most eminent surgeons and pathologists, now entertain a different opinion, regarding the tumors as mere outward signs of constitutional derangement. But Sir E. Home tells us that, "from the facts which have been stated, it appears that cancer is a disease which is *local in its origin*." And Mr. B. Bell says, "from these and many other authenticated facts which, if necessary, might be adduced, of the success attending the extirpation of cancers, there is, it is presumed, very great reason for considering the disease, in general, as a *local* complaint, *not originally connected* with any disorder of the system." The descriptions and recommendations of several other eminent surgeons would lead us to the same inference; while, in an American work, only just issued from the press, we find the following language, viz: "Cancer, like other heterologous products, tends to softening, and until this process is set up, the *injury* occasioned by the disease is *purely local*, and consists in atrophy of the tissues, and other effects of pressure. On the occurrence of softening, however, not only

do the adjacent parts become inflamed, ulcerated, and corroded by the ichorous discharge from the cancer, but this fluid may cause inflammation of the adjacent veins and lymphatics, or, *being conveyed into the blood*, give rise to that peculiar earthy color of the skin, and to disturbances in the nutritive and nervous function, which, taken together, constitute what is called the *cancerous cachexia*. Moreover, partly by the absorption of cancer cells, and partly through the influence of the constitutional diathesis, new tumors may arise in parts of the body more immediately connected by veinous and lymphatic trunks with the original seat of the disease, or in organs more remotely situated."*

On the other hand, Dr. George Macilwaine, in his work on Tumors, published in London in 1845, asserts, that "the original *cause* of no tumor can possibly reside in itself; because the cause must necessarily have preceded the tumor." Again: he says, that, "strictly speaking, we are ignorant of the causes of tumors; at the same time, by a careful observation of facts, we can educe very important general conclusions. 1st, that they are connected with *certain* conditions of the system; 2d, that these are conditions of *disorder*, and that in many cases we can arrive at correct general ideas of the *nature* of such disorder," &c. These extracts are sufficient to show, that the important question, whether heterologous tumors are of local or constitutional origin, is by no means settled, even among the most intelligent members of the profession. Hence we must proceed to an examination of all the facts within our reach, bearing on this point. And first, do cancerous and tuberculous diseases ever arise from *hereditary* influences? Perhaps no question pertaining to medical science is more firmly settled in the affirmative than this. The only way that the advocate of the local origin of cancer can account rationally for its hereditary transmission, is by supposing that the *cancerous poison* of Home, or the cancer cells of more recent investigators, being in the blood of the parent, is transmitted directly into that of the child, thereby influencing its development, and laying the foundation for the same disease. For it must be remembered that this class of pathologists regard the extension and propagation of cancer, as the result of the absorption of a specific poison from the cancerous tumor itself; as seen in the above extract from Dr. Stillé's late work. But if this doctrine was true, we ought to have children born with cancers; or, at least, we should have cancerous diseases developed most frequently in childhood and youth, in the same manner as by the transmission of the syphilitic virus. And yet every physician knows that, with the exception of the soft or spongoid form of cancer, the disease is exclusively one of adult life, occurring very rarely before the age of 30 years; a period, indeed, during which the blood must have undergone so many complete changes, that we can hardly suppose any specific poison or cancer cells could have been retained to constitute the nidus or commencement of a new tumor. We are aware that Sir E. Home and others endeavor to avoid this difficulty, by contending that it is not the disease which is transmitted, but "*the predisposition only.*" But pray, what constitutes this *predisposition?* It can certainly be nothing more

* See Elements of General Pathology, by A. Stillé. Philadelphia: Lindsay & Blackiston, 1848.

nor less than a peculiarity of constitution, a cancerous or tuberculous diathesis; by which we simply mean such a condition of the solids and fluids of the system as is favorable to the formation and deposition of cancerous or tuberculous matter. But this again is only another mode of expressing the *constitutional* origin of the disease, and therefore concedes the whole question. Hence we shall assume it as settled, that so far as these diseases are hereditary, they are of constitutional origin. Second, are those cases in which no hereditary influence can be traced, primarily local? So far as typhous and scrofulous deposites or tumors are concerned, no intelligent physician now thinks of regarding them in any other light than as constitutional diseases; and, indeed, the same may be said of the tuberculous also. Hence, whatever argument can be founded on the analogy of the other heterologous formations would be strongly in favor of regarding the different varieties of cancer also as constitutional diseases. And if we examine with due care the history of every case, we shall find abundant evidence to confirm the inference drawn from analogy. Thus, far the greater number of cancers in the female make their appearance about the time that menstruation ceases. This is especially the case with the hard or scirrhous variety, which is so often found in the mamma and uterus. Thus Sir A. Cooper tells us that he does not recollect more than two cases of this kind, in females under 30 years of age; and Sir C. Bell says, that "true carcinoma of the breast belongs to that period when the uterine functions cease." Indeed, so generally is this acknowledged by surgeons at the present time, that the age of the patient is regarded as an important item in making up the diagnosis in doubtful cases. But if the disease is simply local in its commencement, why should it so uniformly pass over the whole period of virility or active womanhood, during which the breasts and uterus are so frequently undergoing alternations of excitement and repose; and are certainly more liable to injuries from accidental causes than at any other time of life? And why should it thus occur so often in both sexes just at that time when those important constitutional changes are taking place, which mark the commencement of man's declining years? Surely these questions can be answered in no other way, than by referring the origin of the disease to those constitutional disturbances, or morbid alterations in the functions of some of the assimilating or excreting organs, which are so apt to occur at that period of life. And a minute history of each individual case will strongly confirm this inference. We say the *minute* history, because nothing is more defective than the common mode of examining this class of patients. For instance, a woman presents herself with a lump or sore in her breast: the surgeon first orders it uncovered, and proceeds to an examination of the diseased part. And he not only inquires, with much care, in regard to the length of time it has existed, the kind of pain felt, &c., but he brings to his aid the test glass of the chemist, and the microscope of the naturalist. In a word, he omits nothing which will aid him in determining the character of the local disease; the all-absorbing question being, whether the disease is malignant or non-malignant, cancer or not? This point decided, the surgeon, as if from mere habit, puts the question, "Is your health good except the breast?" And the patient, whose anxieties have all centred on that one point perhaps for months, very naturally answers "Yes;" and here the examination ends.

It was only yesterday that I was consulted by a lady, 47 years of age, large size and somewhat corpulent, the mother of several children, and of active, industrious habits. The breasts were large, and in the left one was a tumor, presenting a lobulated, irregular feel, a retraction of the nipple, a puckered state of the skin just below the nipple, and giving rise to sharp, lancinating pains. The tumor occupied the central and lower part of the gland, and seemed to implicate about one third of its entire substance. Only two months had elapsed since it first attracted the patient's attention. Here is a case of well-marked scirrhous tumor, of recent origin, without any apparent *Carcer Cachexia*, and with what the patient herself calls "very good general health." But on examining more closely, I find that her uterine functions have been irregular, the menstrual fluid paler than natural, much pain in the back and loins, unusual sensitiveness to cold, some torpor of the bowels, appetite good and freely indulged, frequent headache, tongue moist and covered with a yellow fur, pulse small, 80 per minute, skin rather dry, urine not as free as natural, ———, conjunctiva, quite yellow, with much inclination to sleep. All these symptoms had continued, in a more or less marked degree, for several months before any difficulty was discovered in the breast. Yet, in reply to the question, "Is your general health good?" she promptly answered, "Yes, very good." And the case may be taken as a very fair specimen of what some would consider a strictly local cancer, there being no appearance of cancerous deposite in any of the neighboring glands,—indeed, the case had been examined, and pronounced of local origin, and a very confident assurance given that a *permanent* cure would be effected by extirpation.

It is true, that the case presents as few constitutional symptoms, or signs of functional derangement, as any that I have ever examined; and still, it seems to me that no careful observer can fail to find abundant proof that the disease is not local merely. Hence, in those cases which have been reported, in which the general health is stated to be *good*, without entering into any detailed account of the condition of the different organs and their functions, we may very reasonably doubt the minuteness and accuracy of the observer's examination; while, without such minuteness and care, it is plain that the case must be valueless, so far as the question now under consideration is concerned.

But if the acknowledged hereditary origin of tubercle and cancer, the analogy of other heterologous formations, and the minute history of all other cases, alike lead us to the conclusion, that these varieties of disease are owing to primary functional and constitutional disturbance, we shall find the results of operations performed for their removal, still more striking and conclusive. Thus, Dr. Alexander Munro mentions sixty cases extirpated under his observation, only four of which remained free from the disease at the end of two years.

In 1770, Mr. Hill published 88 cases of extirpation, 40 of which were alive and sound, in whom the operation had been performed more than two years. Boyer states, that out of 100 cases of cancerous breasts extirpated, only four or five remained permanently cured. Home describes 17 cases, five only of which proved successful. And in the April No. of the Amer. Jour. Med. Sciences, Dr. U. Parsons relates 16 cases of mammary scirrous, occurring in his own practice, of which the disease re-appeared in 9; and, of the remaining 7, one died of colic

in three years, one of pneumonia suddenly in about one year, one of tubercular consumption in five years, and less than two years have elapsed since the last two were operated on. This leaves only *two* out of the 16 alive and free from the disease at the end of five years from the period of their extirpation. Thus, if we leave out Mr. Hill's cases, we shall have only 16 patients living and free from disease, at the end of five years, out of near 200 operated on. And even how many of these finally died of the disease, either internallyor externally, it is impossible to ascertain. It is true that Mr. Hill reports a very large proportion of patients cured, and so does Mr. Nooth, Mr. Fearon, and some others. But their statements are rendered almost entirely valueless, from the short time which is allowed to elapse between the performance of the operation and the date of the reports. Indeed, a very large majority of the cases reported as cured in our medical periodicals, are made within a few weeks or months after the operation; or if at a later period, they give us no information in regard to how long they remained cured. Thus Mr. Hill, whose report has perhaps done more to encourage operations than that of any other man, says, "that out of the first 45 cases, one only proved unsuccessful; in three more the cancer broke out again in different parts; and in a fifth, there were threatenings of some tumors at a distance from the original disease. These tumors, however, did not appear till three years after the operation, and the woman was carried off by a fever before they had made any progress. All the rest continued well as long as they lived." One, he states, lived over thirty years, and 15 were living at the date of his report; the last of whom were operated on 11 years previous. Now although this appears like a very flattering statement, yet when we look at it more closely, it amounts to simply this, viz.: out of 45 cases, one never healed; four returned externally; 24 died within 11 years, but whether of internal cancerous deposits and irritation, or of other diseases, we are left wholly in the dark, and the remaining 16 lived beyond 11 years apparently free from disease. Hence, instead of being permanently successful in 6 cases out of 17 as claimed by Mr. Hill, we can safely put down as such only 1 out of 3. And even this is far greater success than has been obtained by other surgeons. Thus Dr. Parsons, in a Boylston Prize Essay, published some dozen years ago, states as the result of his extensive inquiries, that in this country relapses occurred in at least two thirds of the cases operated on. And in his recent table of statistics to which we have referred, he says he ought to have stated it at "*more than three-fourths.*" Sir Astley Cooper, also, estimates the failures of entire cure at three fourths. In a report made to the Royal Academy of Sciences, Paris, in 1844, there was included 277 operations for cancerous tumors of the breast; of which 73 had been performed within two years, and consequently could not be taken into the account. Of the remaining 204, twenty-four had died, and 87 others had already relapsed; and yet 27 of these cases were operated on in less than one year after the first appearance of the disease. Until very recently, two causes have served to delude the professional mind on the subject. The first we have already alluded to, viz.: the habit of reporting all cases as cured which did not re-appear externally within 12 or 18 months after extirpation; and the second arose from the entire want of attention to the causes of death, where this took place in from 1 to 10 years after the operation. Whereas,

more recent investigations have clearly demonstrated, that in a large majority of these latter cases, the death has really been caused by a continuance of the cancerous disease, its location only being changed from the external part to some internal organ, as the liver, spleen, lungs stomach, &c. So true is this, that all the more recent writers who have bestowed much attention on the subject, agree with Dr. Walter Hayle Walshe of London, when he says, in his recent and very valuable treatise on the "Nature and Treatment of Cancer," that "individual predisposition, or, as he prefers to call it, CONSTITUTIONAL APTITUDE, must be esteemed a NECESSARY condition of the production of this disease." And further, that *excision*, so far from being generally successful, no matter how early it may be performed, "cannot be undertaken without imminent risk of placing the patient in a worse condition than he or she was previously to the use of the knife." This latter position is so strikingly confirmed by the exceedingly valuable statistics presented by M. Le Roy d'Etiolles to the French Academy, in 1843, that we shall close this branch of our inquiry by a statement of a part of them. Thus out of 1172 patients with cancer not operated on, 18 lived more than 30 years after the first appearance of the disease, 34 lived from 20 to 30 years, and 228 lived from 6 to 20 years; while out of 801 operated on, only 4 lived over 30 years, 14 between 20 and 30, and 88 from 6 to 20 years.

(*To be continued.*)

ART. IX.—EXTRACTS FROM THE MINUTES OF THE LYCEUM OF NATURAL HISTORY.

June 21*st*, 1847.

Mr. Redfield made some remarks concerning the drift on the west end of Long Island, and stated that, among the fragments of shells, he had obtained a very fine cast of Venus Mercenaria, found at the depth of 25 feet below the surface; a specimen of Solerurtus Carribæus, filled with comminuted lime and quartz; part of a cast of Mya Arenaria, and a mass of Ostrea Virginica, Buccinum Obsoletum, and fragments of other shells. There was some difficulty in determining what belonged really to the drift, on account of the rubbish in the immediate vicinity, but that by a careful and minute examination, the boundaries between these two deposites, the one natural and the other accidental, could be accurately determined. Mr. Hodge made some remarks on similar deposites in the State of Maine: the fossils, as on Long Island, always occur below the drift, in large quantities, and well preserved; occasionally the bark of the birch tree and the common rock-weed are found associated with the shells.

Mr. Squier gave an account of the ancient mounds of the West, particularly those of Ohio. In the course of his investigations, he had examined more than two hundred, but could procure only one perfect human cranium. It appears that but one body was ever buried in each mound. He accounted for the numerous bones found in them, from the use made of them by succeeding tribes as convenient burial-places,—these latter bones being found but a few feet from the surface, whilst the more ancient bones, and those originally deposited there, were invariably found carefully placed deep in the tumulus, and usually

with a plate of mica on the head. The mounds, he remarked, were of two kinds, some being used for sepulchres and others probably for altars. The mounds used for religious purposes were stratified, and appeared to have been formed by regular depositions of the material in such portions as a man could readily carry. A flat stone on the top of the mound, but always covered with earth, he considered as the altar; on it, among a material having a carbonaceous appearance, were found rudely-sculptured images of various animals, formed of porphyry similar to that found at Lake Superior, together with fossil teeth and ornaments made of them; marine shells, identical with some found on the shores of the Gulf of Mexico, strings of irregularly shaped pearls, sharks' teeth, knives of obsidian, copper rings and copper in a variety of forms, some silver ornaments resembling those worn by the Mexicans before the conquest of their country by the Spaniards; and in one, fifty pounds of galena. As to the age of these mounds, he offered no conjecture: on one of them was a large tree which, when felled for the purpose of determining its age, showed 580 concentric rings; the mound must, of course, have been much older.

July 26th.

Dr. Roemer exhibited two maps of Texas, and made some observations on the geology of the western portion of the country situated on the Guadaloupe river. The formation belongs to the cretaceous group, and the fossils correspond with those of the same formation in the south of Europe. The river has its rise in a granitic region; farther to the south, the granite gives place to transition limestone, very rich in trilobites, then to carboniferous limestone, characterized by the products which it contains; still farther to the north, the cretaceous formation again occurs. No tertiary rocks were found except on the Brasos river, near the falls.

August 30th.

Dr. Roemer made some observations on the cretaceous formation of New Jersey. This, he stated, is of the upper formation: the green and is sometimes overlaid by a calcareous deposit like that at Maestricht. The fossils are identical in many instances. At Timber Creek the remains of the morosaurus are found. It is remarkable that bones and other fossil remains should be the same in two places so far removed from each other.

November 8th.

Professor Agassiz, in some remarks on the fossil fish of the United States, observed, that from an examination of specimens from different localities, several new species had been obtained. There was, however, a marked difference between them and the fish found in similar formations in Europe. On the eastern continent, cartilaginous fish are the prevailing type; in America, the osseous are the most numerous. In European fossil fish, the tail is symmetrical; in the American, oblique and unsymmetrical; and the vertebral column, instead of terminating at the separation of the lobes of the tail, extends through the centre of the upper lobe nearly to its termination. He considered the fossil fish from Virginia more recent than those from New Jersey and Connecticut.

November 29th.

Major Le Conte read a note from Dr. James E. Dekay, in which he wished to correct some inadvertencies and misnomers which occur in his Natural History of the Crustacea of New York.

The Gonodactylus setemanus in the cabinet of the Lyceum, has been determined by Dr. Gibbes, of Charleston, S. C., to be the Callianassa major of Jay. In the description of Xantho mercenaria, there is a clerical error in the character of the genus: "a hiatus below the external orbit," should be, *no hiatus below*, &c. Jesarma cinerea is distinct from S. reticulata; Plagiusa Sayi is probably S. squarrosa of the East Indies; Ilia punctata is the Guaia punctata of Milne Edwards.

December 20th.

Professor Loomis gave a very interesting and detailed account of a satisfactory series of observations to ascertain the difference of longitude between Jersey City, Philadelphia, and the City of Washington, by means of the magnetic telegraph, so rigorously conducted so as to leave no fear of as great an error as one tenth of a second.

January 10th, 1848.

Mr. Colby made some remarks on the lead mine at Eaton, New Hampshire. This mine was discovered about twenty years ago, worked for a short time, and then abandoned. Last year the work was again undertaken; the vein which runs north and south is six feet wide, and has been worked to the depth of forty feet. Below the depth of twelve feet it is intersected by cross veins rich in silver, yielding as much as eight pounds of silver to the ton of lead. At the depth of twenty feet, a mass of pure lead ore, from five to six feet in thickness, was obtained. Accompanying the vein of lead is one of zinc, generally eight feet in thickness, and composed chiefly of yellow blende. This last ore has been melted with copper, and produces a superior brass. Mr. Hodge gave an account of a bed of sand found in Berkshire county, Massachusetts. This bed was discovered last year; it is of great extent, and of the most perfect purity, and conveniently situated for furnishing large supplies at a small cost. The locality of this important material for glass works, is in Lanesborough, about five miles northeast from Pittsfield, and within half a mile of the North Adams railroad. The existence of quartz sand in this region has been long known, but none has before been discovered so entirely free from all foreign matter. Its source is in the quartz rocks of Berkshire valley, a rock familiar to all geologists, known as a continuation of the Potsdam sandstone, greatly modified here, by its vicinity to the igneus rock formation of the Hoosack hills. It forms, throughout its range in Connecticut, across the State of Massachusetts, and along Vermont as far as Burlington, to the north mountain ridges of the most compact quartz, a stone of great hardness and durability. It assumes a portion of mica, and becomes more granular in its character, and then forms the valuable hearth-stone used in the blast furnaces of the country. It disintegrates and crumbles into sand, and the product is the most beautiful material for the manufacture of glass that has ever been used. The locality whence it has as yet been obtained, is one of these north and south ridges: at one point in it the rock, which in most other places is found in projecting ledges of the most refractory character, is here in a soft and crumbly state.

The strata lie nearly vertical, and are easily broken up by the pick. Very thin seams of talcose slate and of clay separate the layers of quartz, so that, after quarrying, the sand is washed in order to remove these, the only impurities. The stone is so perfectly disintegrated, that a lump of it, when taken out and dried, soon loses its form, and crumbles into fine sand; it is impossible to keep it in a mass when dry.

The outcrop of the bed is close to the surface, and clean and white samples have been dug up at the depth of only two feet. It is now uncovered over an area of perhaps a hundred feet by fifty, and has been worked about fifteen feet deep, presenting a quarry of dazzling whiteness, in the midst of the dark evergreens by its side. The whole extent of the bed is at least five hundred feet, and may extend much farther.

The supply of this sand may be considered inexhaustible; for, unless the stone becomes hard, there is no limit to its depth, and none is yet known to the length of the disintegrated portion.

The composition of the sand is pure silica, and it is considered, so far as it can be learned, a superior article to any that has been received at the glass works. On examining it with a powerful lens, the grains lose their whiteness, and appear like the clearest crystals of quartz, perfectly transparent. It is an excellent article for plate glass, and it is to be hoped that the manufacture of this may soon be introduced into our country. Samples sent to Liverpool have been analyzed in England; the result, according to the certificate of the chemist, is, that it is pronounced superior to the best sand hitherto supplied to the glass works there. The business of exportation has now commenced, both to Liverpool and Havre.

The bed was discovered by Samuel Smith, of Massachusetts, and through his enterprise, this new branch of business has been brought to light, and every preparation made for its extension during the coming year.

January 31*st.*

Dr. Le Conte made a report on the fossil horse teeth, in the museum of the Society. He had detected five different species among them.

From Europe:

1. *Equus caballus*, Lin. A very perfectly preserved, superior molar, from Tuscany, scarcely differs from recent specimens: the diameters of the tooth are equal, but the margins of the crescentic islands of enamel, which look towards each other, are more plicated than in other specimens.

II. *Equus (asinus) Oloeni.* L. C. The *asinus fossilis* of Oloeni (British Fossil Man., p. 396. As the genus asinus is not admitted by systematic naturalists, it has become necessary to change the name of this species, as there is already an Equus fossilis described by Von Meyer. The present species is, therefore, named after the distinguished palontologist, to whom we are indebted for its discovery. Our specimens were received from Tuscany.

From America:

III. *Equus curvidens*, Owen. To this species, as recognised by Dr. Leidy, belong two superior molars from Monmouth county, New Jersey. The anterior molar is straight. On a comparison with the same tooth of E. caballus, this striking difference may be observed: the

anterior part of the anterior crescent points inwards, instead of forwards, and is directed to a sharp angle in the surrounding enamel. In E. caballus no such angle is found. The posterior molar from the same locality is very much curved, and has, as Dr. Leidy observes, no trace of an island or lobe of enamel at the posterior part.

To the same species belong a superior and an inferior molar from Big Bone Lick; the enamel folds are more plicated than in E. caballus, and the internal fifth prism has the posterior angle more produced. The inferior molar is much more compressed than in the living species, and has a greater lateral curvature; the medial external fold of enamel also penetrates deeper than in E. caballus.

IV. *Equus Americanus*, Leidy. Pro. Ac. Nat. Hist. Phil. vol. 3, p. 265. A fragment of a posterior upper molar from Big Bone Lick, presenting the plicated enamel folds, and the small detached posterior island characteristic of this species.

V. *Equus brevidens*, L. C. n. s. There are two superior and one inferior molar of this new and undescribed species from Big Bone Lick. The superior molars are straight and but little worn, so that in one of them, the different parts of the crescents are scarcely connected. Notwithstanding they are much shorter than corresponding teeth of E. caballus, the enamel folds are very much plicated. But the best character is drawn from the excess of the lateral over the centero-posterior diameter. In all other fossil species, there is a tendency to a lateral compression, but in this the compression is in an opposite direction.

The inferior molar has the anterior and posterior margin destroyed; it appears to have been similar in shape to that of the E. caballus, but is much shorter, the external fold of enamel is much deeper, and is not bifurcated; the internal valley is shallower, the curvature scarcely perceptible. Mr. Seram made the following observations on the Onondago salt group.

The Onondago salt group holds a prominent position in the silurian system, as unfolded in Onondago county, New York. In Montgomery county, this group appears directly over the Clinton group, by the intervention of the Niagara group, upon which it rests; it then passes through this state into Canada.

The thickness in Onondago county is about 800 feet. The Erie Canal is excavated in this rock through Madison, Onondago, Cayuga and Wayne counties. From its decomposition is formed the soil throughout its course, for an average width of about eight miles, forming, perhaps, the richest wheat-producing district in the State.

The members of this group, beginning at the lower ones, are:

I. A fissile shale of a blood-red color, varying in thickness from 100 to 500 feet in depth, and permeable to water.

II. A red and green shale of less thickness, containing the lower tier of plaster beds in its upper portions.

III. The lower tier of plaster beds, consisting of immense masses of gypsum of a conical form, and arranged very nearly horizontally.

IV. Funnel-shaped cavities, supposed to have once been filled with fossil salt, but which are now filled with carbonate of lime and clay, the depositions of the percolation of water from the rocks above.

V. A limestone rock of uniform thickness, with numerous pores passing in a perpendicular direction. The decomposed material of the pores has been replaced by percolations from the rocks above.

VI. Above the last-mentioned rock, which by Mr. Eaton was named vermicular lime rock, is the upper tier of gypsum or plaster beds, resembling in character and arrangement the lower beds.

VII. The magnesian lime rock, with needle-shaped cavities passing in a horizontal direction.

Salt water of 71 per cent. strength, is reached at a point somewhat below the lower members of this group, in a deposit of sand.

Onondago lake is underlaid by a bed of marl of limited lateral extent, and of a mean thickness of six feet imposed upon this deposit of sand. Surface water percolating through the upper groups and the upper members of this group, upon reaching the fossil salt, dissolves it; and this solution passing through the lower members of the group, and on the outside of the marl, finds a resting place in the above mentioned deposit of sand.

An analysis of the salt water, 35 gallons of which contain one bushel of salt, exhibits a considerable proportion of sulphate of lime. In the evaporation of the water, it has been observed, that the first deposit was iron mixed with sulphate of lime; the second, sulphate of lime without iron; and last, the salt. From this it appears that the iron is the least soluble substance in the compound, and is the most easily separated from it.

This fact may go far to account for the red color of the shales through which the salt water passes, particularly those which are the lowest. It is not impossible that chemical affinities may have facilitated the separation of the iron from the water, in its passage through the shale; but it is undoubtedly true, that the shales abstracted their color from the water in its passage, until they reached the point of saturation; afterwards the iron passed on with the water. Mr. Redfield called the attention of the Society to a recent fault in the rocks of this island, on 3 d street near the North River: the rock, which presents a large surface, shows a displacement of two inches, which must have happened after the surface of the rock had acquired its present form.

March 13.

Dr. Gibbs directed the attention of the Society to the analogy between the laws which govern the formation of doublets in the organic and inorganic world. When, for instance, monsters are formed by the union of two individuals, their union is almost always effected between similar parts. This is precisely what happens in the union of crystals. Two crystals always unite by similar or symmetrically-situated planes.

Dr. W. L. Jones read a description of a new species of Woodpecker from Georgia.

Picus Le Contii. Above, variegated with black and white; anterior part of the neck, sides and breast pale cenereous-brown; a broad red band on the occiput, and a large dirty white spot in the suprascapular region; chin and belly whitish. Bill compressed: feet 3-toed.

March 20.

Mr. Hodge made some remarks on the lead mines of the United States. He stated that in the lead of the Western States, no appreciable amount of silver can be detected; and in many instances the bed of ore is discovered by following the line of bushes, which grow in the deep soil of the fissures in the rock. The solid veins which occur in the limestone are worked by blasting. The vein sometimes opens

into a cavity which is often extremely rich. The ores of Missouri, Illinois and Wisconsin, are the same, although found in different strata, but all are below the coal formation. The argentiferous galenas are found from New England to Carolina. The first silver obtained from lead ore and taken to the mint, was from King's mine, North Carolina, since called the Washington mine. The richest ore is from Rhode Island, and contains thirteen pounds of silver in the ton of ore. The galena from Andover is remarkable as being mixed with iron.

March 27.

Mr. Chase, U. S. consul at the Cape of Good Hope, made some observations on a Bushman boy, aged 19 years, who accompanied him.

This boy was brought to the Cape by some traders from the interior, who found him lying senseless, in a place where a number of Bushmen had been murdered by a band of Kafirs. Signs of life being perceived in the child, he was taken up and restored to the exercise of his faculties; he had been in Mr. Chase's possession four years: he could speak English, but had lost the knowledge of his native language. In mind and manners, he did not differ from a child of five or six years of age, yet there was nothing idiotic in them, nor in his appearance.

The only information we have of this race of men is from the traders who pass through their country, in going to the interior; the distance from the European settlements must be very great, as these traders are frequently absent for two or three years. From these accounts, it appears that they number about 5000 individuals, and rove naked over the plains, have no dwellings and no government, live upon any animal or vegetable food which they can obtain, but chiefly on a species of antelope that abounds in the region which they inhabit. Their only weapons are rude bows and arrows. They are frequently hunted like wild beasts, both by the Kafirs and the Dutch boors, and killed without mercy, in revenge for the cattle which they had stolen, or which had been made away with by them, when found straying beyond the bounds of the settlements.

These people average 4 feet 4 inches in height, and possess more intellect than is usually ascribed to them. Their sight is very good. On the voyage from Africa to Europe, this boy could distinguish vessels long before they were visible to any one else on board the ship. His hair is closely curled in small locks, or rather knots, and each hair is more or less flattened. This is the third one that has been brought from Africa; the other two are in Europe.

PART SECOND.

Critical Analysis.

ART. X.—*The Human Brain; its Structure, Physiology and Diseases, with a Description of the Typical forms of Brain in the Animal Kingdom.* By SAMUEL SOLLY, F. R. S., etc. From the 2d London edition, with 118 Wood Engravings.—Philadelphia: Lea & Blanchard, 1848, 8vo. pp. 496.

On Disorders of the Cerebral Circulation and of the Connection between Affections of the Brain and Diseases of the Heart. By GEORGE BURROWS, M. D., etc., with Colored Plates. Philadelphia: Lea & Blanchard, 1848, 8vo. p. 216.

THERE is no subject connected with our science which possesses so much intrinsic interest and importance, as the structure and functions of the human brain; and yet, as Mr. Solly well observes, acccording to the plan usually pursued in describing this organ, by lectures and systematic works of anatomy, the information conveyed amounts to little more than a vain catalogue of names applied to parts, without reference to their structure, their functions, or even their analogies in the nervous system of the lower orders of animals.

"Such a barren prospect," says Mr. Solly, "as a list of names, holds out but little to attract the most zealous among students; while the dryness of unconnected detail, and the obstacles to clear conceptions engendered by the absence of every thing like arrangement, almost certainly deter him from attempting to learn more than is required to prepare him for the diploma. It is unfortunate, indeed, that candidates for this honorable certificate are still very generally required to describe the appearance as presented by the brain dissected, or rather as strayed, by the old method of slicing; a method most unphilosophical in its conception, and totally inadequate to impart any real information in regard to the structure of the organ. And I do not hesitate to affirm, that this mode of examination has contributed essentially to retard the diffusion of sound knowledge in regard to the anatomy and physiology of the most important system in the body."

To GALL alone belongs the credit of teaching how to separate the fibres of the brain without cutting them; and though his mode of studying this organ possesses so many and so great advantages over that of slicing, it is still but little practised by teachers of anatomy. If we desire to simplify and give a character of general interest to the anatomy of the human brain, the true method would be, to commence with the structure and functions of a nervous system in the lowest and simplest forms of animal existence, rising by degrees to the highest; care-

fully observing each addition of parts, and the relation which is borne by these to an addition of function. In this way we learn, that this organ in man is but a gradual development from an extremely simple fundamental type on one uniform and harmonious plan, and that the apparent complexity of the cerebro-spinal axis in man really arises from the great concentration, as opposed to the great diffusion of its component parts in the lower order of animals; for in no particular are the higher orders more strikingly distinguished from the lower than in the concentration of function within circumscribed limits.

The first part of Mr. Solly's work is taken up with a description of the *Structural Anatomy of the Brain;* in which we have a full account of the microscopic appearances observed in this organ, as given by Ehrenberg and others. Part II. is occupied with its *Comparative Anatomy*, through the five great Divisions of the Animal Kingdom, viz.: 1. *The Acrita;* 2. *Radiata;* 3. *Articulata;* 4. *Mollusca;* 5. *Vertebrata.* This portion is admirably sketched, and leaves nothing unsaid which can throw the least light upon the subject. Part III. is devoted to a consideration of the "*Protective Apparatus of the Human Brain,*" under three Heads: 1. *The Osseous or Bony;* 2. *The Membranous;* 3. *The Aqueous Afliva.* In Part IV. the *Weight of the Brain* is considered. Part V. *Configuration of the Encephalon.* Part VI. *Dissection of the Human Brain and Spinal Cord.* At the end of this Part, Mr. Solly remarks as follows:—

"In conclusion, let me express the hope that these views or analyses of the component parts of the encephalon will really simplify the whole of its anatomy, and materially assist the student in acquiring a knowledge of its true character. I wish that custom did not require the student to burden his memory with fanciful and unmeaning names, and that instead of learning a long catalogue of the contents of the lateral ventricles, as they are erroneously designated, and puzzling himself with the abused titles of *Hippocampus, major and minor, Prohippocampi, Cornui Ammonis*, &c., he would be required simply to observe how the spinal columns appear to terminate superiorly in two large tubercles, the *corpora striata*, and *thalami*, from the sides and under parts of which the hemispheres spring out, being afterwards reflected so as completely to envelop this bulbous extremity of the spinal cord. In the same way the third ventricle should be described as a fissure separating the two halves of the brain, his particular attention being directed to the commissures which pass across it to connect the different cerebral ganglia with one another. The description of the relative position of these ganglia, the commissures connecting them, and their relation to the ganglia and columns of the spinal cord, comprehend all the information which is either interesting or useful to the student."

In Part VII. we have a full description of the *Cerebral Nerves.* Part VIII. treats of the *vessels employed in the Cerebral Circulation.*

The chapter on the *Development of the Brain*, is one of the most interesting in the whole work. The author thinks that the vast mass of facts which have been accumulated for its elucidation, are amongst the most satisfactory and conclusive in proof of the existence of general laws instituted by an Almighty power, and in conformity with which every organ in the animal series is found to be framed on one beautifully simple and harmonious plan; and that it is only by the discovery of the general laws which regulate the phenomena of vitality, that we can ever expect to raise the study of Physiology to its legitimate rank among the natural sciences. The gradual development of the brain

and spinal cord on one simple and uniform type, is a beautiful illustration of the principle, for we find that the complied structure which we meet with in the human adult, is at an early period of fœtal existence as simple in its general arrangement as many of the permanent forms of the lower vertebræ in animals, and that in its development Nature appears to have pursued the same plan which she has adopted in the organization of each individual in her vast family, gradually adding one part after another, and at the same time concentrating the whole, each fresh addition changing the appearance of the several parts; so that unless the chain be observed from its very commencement, the analogies which are so palpable when we procee: step by step, are obscured, and even made altogether incapable of demonstration.

We have perused Part X., relating to the *Physiology of the Cerebro-Spinal Axis*, with peculiar satisfaction. Knowi: g that the author was formerly somewhat opposed to the principles of phrenology, we were not aware of his entire change of opinion on this subject, as evinced in the present chapter, until we took it up; and it certainly ought to teach those a little more modesty, who are in the habit of ridiculing doctrines sustained by such men as the author of this elaborate work; not that any man should bend implicitly to the authority of great names; but that great names should teach us to question our own judgments, and examine our opinions with peculiar care, in points wherein we may differ from them. The sources of our information on the functions of the nervous system are fourfold: 1st. Comparative Anatomy, that is, observation of the parts composing it in the lower animals, and the relation which they bear to those of man, considered in connection with the development of their organs of sense and muscular action.

2dly. Experiments on living animals.

3dly. Pathological traits.

4thly. Observations between the relations of the size of the human cranium in individuals, and their manifestations of intellect.

With respect to the best source, as affording us knowledge of the functions of the brain, Mr. Solly remarks as follows:

"The mass of evidence in favor of the belief that the great hemispherical ganglion, or cervical substance of the brain, is the immediate agent in all mental operations, is, in my own opinion, so conclusive, that it becomes next a most interesting question whether different portions of this ganglion play different parts in the production of mental phenomena. Now I candidly avow, that the more I have examined the facts adduced by the supporters of this theory, the more I am inclined to believe that its *general principles* are correct and philosophical. I entirely agree with that talented observer, Mr. George Combe, that "Phrenology, in its evidence, rests on the same foundation as the practice of medicine. The existence of disease cannot in general be determined by weight or measure, and the characters of diseases can be judged only by their appearances, or the symptoms which they present. The organs affected—the degree to which they are affected—and the extent to which medicines act on them—are all estimated by the exercise of observation and reflection as mere symptoms. In the practice of medicine, anatomy, physiology and pathology shed their light to help the judgment in its estimates, but they do not reveal the theory of medicine *a priori*, nor do they render it a demonstrative science. The same general laws of evidence must necessarily apply to the study of phrenology. The mental manifestations are not ponderable nor measurable any more than the capacity for pain or pleasure, or the powers of hearing or sight are so. We estimate the degree in which these susceptibilities and capacities are pos-

sessed by different individuals, and regard our knowledge as substantial, and we must of necessity learn to estimate the force of the mental manifestations by a similar exercise of observation and reflection, or remain forever ignorant of mental science."

Mr. S., in the course of his observations on the composition and properties of *neurine*, and on the essential elements of a nervous system, establishes the following fundamental principles:

"1. That vesicular *neurine** is the source of power.
"2. That medullary neurine is the conductor of it.
"3. That medullary neurine is also the conductor of those impressions which call forth the power of the vesicular neurine.
"4. That the vesicular neurine is collected in masses of variable forms and size—the ganglia.
"5. That the medullary neurine is moulded into cords and bands,—the nerves and commissures."

With respect to the functions of the nerves, Mr. S. states, that besides those of sensation and motion, there is another system for the involuntary—the conservative movements of the body—the excito-motory system of Marshall Hall.

"The spinal nerves," he observes, "are connected with the spinal cord by anterior and posterior roots: each root consists of two sets of nerves, making, therefore, four sets of spinal nerves functionally distinct. The two anterior are the conductors of volition from the brain to the voluntary muscles, and the conductors of a stimulus to muscular action, independent of volition from the ganglia of the spinal cord, the efficient nerves of spinal power. The posterior roots are also bivary in their functional power—nerves of sensation, conducting impressions to the brain, and recognised by the conscious being; and conductors of impressions to the spinal ganglia from parts requiring the protective action of muscles too important to be left to the control of mind—the incident nerves of spinal impressibility."

It is too late in the day, therefore, according to our author, to speculate as to the existence of an *excito-motor* system of nerves, since they are capable of demonstration by the scalpel of the anatomist, as shown by Grainger, Carpenter, and Newport.

The *spinal cord*, according to Mr. S., is a series of ganglionic centres, structurally homologous and functionally analagous to the jointed ganglionic cord of the articulata, as functionally distinct as the auditory, optic, and olfactory ganglia of the brain; made up of ganglia, nerves, transverse and longitudinal commissures.

The *medulla oblongata* consists of three ganglia on each side of the mesial line, the *olivary* bodies, or lingual ganglia, the *restiform*, or pneumogastric ganglia, and the *posterior pyramidal* bodies, or auditory ganglia.

The *pons varolii*, though evidently a great transverse commissure, must also be an instrument of power, through the medium of its vesicular neurine; holding some relation to transmission of motor and sensory impressions by the tracts which in the spinal cord conduct them.

The *cerebellem* must perform some very important office in the

* The essential material of the nervous system is called *neurine*—it is that substance in which the peculiar powers of the brain and nerves reside. It is never found by itself, for it is too delicate in texture to retain its properties if it were unsupported; hence, it is always supported and protected by the membranous fibre, arranged in various ways. Indeed, membranous matter forms the basis of each organ, in the interstices of which the peculiar material of the organ is deposited.

animal economy, as its ganglionic portion consists of an extensive surface of vesicular neurine, being in fact a ganglion, or series of ganglia, of great power. We should infer this, also, from its extensive nervous and commissural connections, its motor and sensory tracts, forming the *restiform* bodies, and plunging through the substance of its great transverse commissure, and connected also with its nucleated vesicle. The cerebullum is also intimately associated, through the intercerebral commissure, with the optic, the anterior cerebral and posterior cerebral, and the hemispherical ganglia.

The *function* of this portion of the encephalon, according to Mr. S., is to regulate and co-ordinate muscular action on one part, most probably by means of its central portion, viz: the superior and inferior vermiform processes; and secondly, it holds some relation to the generative functions, as proved by Drs. Gall, Vimont and Broussais.

The *locus niger* in the *crus cerebri*, is, according to Mr. S., the seat of the excito-motor power of the third pair of nerves.

The *tubercula quadrigeminæ*, or optic tubercles, are the instruments by which the physical impressions of light received by the retina are converted into sensations of light, color, form, &c. The *optic thalamus* is the essential ganglion of the *sensory* tract, while the *corpus striatum* is of that of the *motor* tract. These anterior and posterior cerebral ganglia are undoubtedly independent centres of action, forming part of the series of sensorial centres, as shown by Dr. Carpenter, and as we should infer from the large quantity of vesicular neurine they contain.

The cerebral lobes, or *hemispherical* ganglia, are demonstrably the instruments of the mind—that portion of the brain in which sensations are converted into perceptions, and give rise to ideas—comparative anatomy, developmental anatomy, experiments on living animals, observations on its size and form, as indicated by the size and form of the skull, and last, pathology—all afford a mass of overwhelming evidence that this portion of the brain, and this only, is the cerebral organ of intellectual power, and yet the hemispheres are insensible both to puncture and incisions. That part of the brain in which the sensations are converted into ideas, and the ideas hoarded up, to appear again, as it were, as shadows of the sensations, is itself devoid of sensibility. After quoting with approbation from Mr. G. Combe on this part of his subject, Mr. S. refers to the proofs derived from pathology, which are briefly summed up thus:

"If the effusion of blood take place on the surface of the brain, the mind is more or less disturbed; and if the effusion is extensive, the intellect is buried for ever; but if the effusion is limited to the medullary substance, the mind having recovered the first effect of the general shock, remains perfect, though its conducting instruments are paralyzed."

Mr. S. thinks that Gall deserves the thanks of mankind for his labors, as he was the first philosopher who attempted to prove that the brain is not a single organ, but a combination of organs:

"The science which Gall advocated," says Mr. S., "is now well known under the title of Phrenology. Those who have not given their serious attention to this subject, have a sort of indefinite idea that phrenology is some occult science, by means of which its professors pretend to be able to judge of a man's character by an examination of the bumps upon his head. This is the

phrenology of the superficial and the idle, who, not having industry enough to investigate for themselves, set up a baseless shadow, and then take credit for the facility with which they overthrow it—*this is not the science of phrenology*, but the phantom of their own imagination. In the first place, the word bump, in reference to the surface of the skull, has no place in the vocabulary of the phrenologist. The practical phrenologist judges of character by space rather than by mere elevations or depressions. It must always be borne in mind, that the physiological principles upon which phrenology is founded, may be perfectly correct, and nevertheless its professors may make great mistakes in their application."

Again remarks Mr. S.:

"Those who really wish to understand phrenology, and judge of its correctness, ought to read the works of Gall, Spurzheim, Combe, and lastly, the admirable treatise of Mr. Noble.

"My reasons for believing that there must be a great deal of truth in phrenology are fourfold. First, I have received from practical phrenologists, and especially the late worthy Mr. Deville, such accurate characters of individuals known to me, but unknown to them, that I cannot believe the accounts I received could be the result of accident and conjecture, which must have been the case if phrenology is untrue.*

"2d. Phrenology alone--as it appears to me—can account for all the varieties of insanity, especially monomania.

"3d. The facts which have been collected by the late Mr. Deville, showing that the brain will alter its form at any period of life.

"4th. The existence of longitudinal commissures."

Mr. S. states, that in Mr. Deville's collection of casts, there are over 20 which prove an alteration in form; and so far as I can judge, they correspond with the mental and moral experience which the brain experienced in the period during which the changes were taking place.

"If phrenology is true," says Mr. S., "insanity on its first ingress is frequently not a disease of the whole brain, but only a part of it. The first effect of inflammation is to excite to an unnatural degree the natural function of an organ. The function of the organ thus exalted, obtains a mastery over the rest. For instance, a man, from defective education combined with hereditary tendency, allows his love of approbation, his vanity, in other words, to grow with his growth, and strengthen with his strength, gradually becoming the sole ruling principle of his life; at last, *it*, instead of reason, so completely guides and regulates all his actions, that they are contrary to reason, and justly called the acts of a lunatic. Yet all this may go on with reasoning faculties so acute that he conceals the dominant feeling of his breast, the main spring of all his actions; and in a court of law defies any one to prove him insane. The great amelioration which has been effected in the condi-

* The late Dr. Caleb Ticknor, of this city, whose admirable qualities of both head and heart will ever live in the recollection of all who have made his acquaintance, and who was, moreover, a scientific and practical phrenologist, invited, on one occasion, about twenty of the leading clergy of this city to meet at a certain place in Broadway, for the purpose of testing the truth of phrenology, by submitting their heads to an examination by a distinguished phrenologist, who was entirely unacquainted with them, and of course with their individual peculiarities of character. We were fortunately present, and took copious notes of the examination, and we believe there was not a gentleman present who was not taken completely by surprise at the perfect and minute truthfulness of the description, as connected with the traits of character attributed to each. The description of the intellectual and moral traits of the Rev. Dr. S., Rev. C. C., and Dr. S., were so extremely graphic and true to nature, as to excite astonishment on the part of the gentlemen themselves, as well as those present. We believe that not a single gentleman, then present, has ever doubted, since witnessing that experiment, that there is *some truth* in phrenology.—Ed. Jour.

tion of the lunatic has been founded on this principle, that none are so mad as to be incapable of appreciating kindness. Throughout all the admirable and interesting reports of Dr. Conolly, it will be seen that this has been the guiding principle of his boldly humane treatment. The first thing, says this admirable man, is to gain the *confidence* of your patient, and that once obtained, you may do *anything* with him. (p. 267.)

Mr. Solly thus speaks of the bearing of phrenology on the education of the young:

"Mental philosophers have always admitted, that if a man through imperfect education has never had his reasoning faculties called forth, the instrument of that power becomes more or less atrophied, and the power is more or less lost. For instance: take two boys born of the same parents, and with the same or nearly the same original capacity; supposing them differently educated, the one brought up in the fields, and all mental culture neglected, the other trained for a learned profession. When these two have arrived at maturity, oblige them to change places, and the incapacity of the brain of the peasant would only be surpassed by incapacity of the muscular system of the student. The same applies to moral as to intellectual culture, and hence the same importance of early education, for the formation of moral strength, as for the formation of intellectual or muscular strength. But phrenology goes further than merely to insist on the importance of educating the child. It goes further, also, in tracing moral insanity to its real cause. It teaches us that the child inherits more or less of the mental or moral capacity of the parent, just as much as he inherits the form of the face and physical constitution; and as personal beauty may be more or less spoiled and effaced by evil education, (and I refer to the moral and mental education of circumstances and example,) so may the brain, with its mental and moral faculties, be deteriorated and debased by the same causes. But phrenology also inculcates that, although it has pleased the Almighty, for some good and wise purpose, to ordain that not merely the bodily diseases of parents, but even their mental and moral imperfections, shall, more or less, descend to their children; such hereditary imperfections, whether of the intellectual, the muscular, or the mental organs, may be corrected by careful attention."

Let these extracts suffice to show to what conclusions Mr. S. has arrived, after a life devoted almost exclusively to the study of the anatomy and functions of the brain; and if they are at variance with those entertained by some of our readers, let them serve as an incentive to a more diligent and closer investigation of the whole subject. Whether we adopt the views of Mr. S. or not, it is very evident that the flippancy of remark, of physicians and divines, towards phrenology and its advocates, is neither in good taste, nor evinces that liberality of sentiment, or extent of knowledge, which might be expected from men of cultivated intellects.

The last half of the work is devoted to the *Diseases of the Brain*, which are treated in the same masterly manner as the topics already noticed. We have only space to copy the following summary of general principles, for the treatment of all inflammatory affections of the brain:

"1. There is no time to be lost; minutes even are of value.

"2. That inflammation of the brain is a depressing disease, and that, as a general rule, general bloodletting is not often admissible.

"3. That though general bloodletting may sometimes be attended with benefit at the time, the good derived from it is seldom permanent.

"4. That local bloodletting, by leeches and cupping, is generally useful, and especially in cases of insomnolence arising from abnormal action of the brain.

"5. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications frequently will; and if they do, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens.

"6. That aconite and digitalis are the best sedatives, especially when combined with mercury.

"7. When it is advisable to salivate rapidly, raise the cuticle by boiling water, or a similar escharotic, and dress the surface with strong mercurial ointment.

"8. Always commence the treatment with a brisk mercurial purgative.

"9. Soothe the patient's feelings in every way.

"10. Never leave anything that is disagreeable to the patient to be done by a nurse or attendant, such as the application of leeches, &c.; 'but persuade him to have them applied.'

"11. Never lose your patience in the treatment of a chronic case, or try to hasten the cure by increasing the doses.

"12. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it."

In conclusion, we earnestly recommend all our readers to procure this work of Mr. Solly's, as being far in advance of anything hitherto published on the brain, its anatomy, physiology, and diseases. It is issued in the same splendid style in which the enterprising publishers, Messrs. Lea & Blanchard, bring out all their medical publications, viz., fair, clear type, white paper, and beautifully-executed wood cuts,—altogether furnishing inducements to purchasers which few can, and none ought to resist.

The work of Dr. Burrows on *Disorders of the Circulation*, &c., is well known to many of our readers, through the columns of the *London Medical Gazette*, (1843.) It embraces a series of physiological, pathological, and practical essays, of the very highest value to the practitioner, besides endeavoring to establish more correct ideas upon the peculiarities of the circulation within the cranium; upon the effects of alternations of muscular pressure within that cavity on the functions of the brain; and upon the proximate cause of apoplexy and other comatose affections, the author adduces numerous facts, also, to show how far the affections of one important organ may depend upon disease going on, perhaps insidiously and unsuspected, in another. Dr. B. has pointed out with great force and perspicuity, how structural changes in one organ will first produce disturbed functions, and ultimately lesions of structure in the other; and he has especially illustrated this principle by proving the frequent connection between affections of the brain and structural diseases of the heart. His observations on the treatment of apoplexy and hemiplegia, as well as upon the treatment of acute affections of the heart, accompanied with symptoms of nervous irritation, are extremely judicious, and of great practical value, founded as they are on extensive experience and observation.

ART. XI.—*Etherization.—Littell's Living Age*—No. 201.—18th March, 1848.

WE have been favored a copy of the above periodical for March, which is nearly wholly ied with an article from the pen of R. H. Dana, Esq., vindicating the claims of W. T. G. Morton as the discoverer of etherization, as a mode of producing insensibility to pain. We have also received a voluminous Report of the Mass. General Hospital

for the past year, which is also devoted to the defence of Mr. Morton as the sole discoverer of the anaesthetic agents. All this betokens a determination *somewhere*, and on the part of some individuals, to gain the victory by a grand *coup de main*; and if words could carry a point in the face of well known and established facts, then, undoubtedly, Dr. Morton would distance all competitors. It is not enough that the physicians of the Massachusetts General Hospital should combine in his defence; the case requires special pleading, and the law must be invoked; accordingly, the author of "Two Years before the Mast," takes his stand on the quarter deck, and tells us that, a "number of persons, satisfied of Dr. Morton's right to the title of discoverer, and desirous of having all the material facts, arguments and documents, collected and put into a single pamphlet in an orderly manner, and under some degree of personal responsibility, have requested me (him) to perform this duty. *I undertake it as a professional service, and I desire to have it so understood by the public.*" We understand it, Mr. Dana; you wish to say that you have been hired, as a lawyer, to make a special plea in behalf of Dr. Morton, and you do it just as you would have undertaken to make one in behalf of Dr. Jackson, if "a number of persons" had solicited your professional services in his behalf. We find no fault with Mr. Dana for so doing—not the least—he is in the way of his calling; we only mention the circumstance as something new under the sun, this employment of legal practitioners, in the absence of actual litigation, to argue a case like this, which is only to be decided by reference to facts.

In order to an understanding of the question at issue, it is necessary, says Mr. Dana, to direct our attention to two points: "1st, What was known on the subject before this discovery was made? 2d, What is the precise thing that makes this a discovery?" To arrive at a solution of the first question, Mr. D. quotes the following from the specification of Drs. Morton and Jackson, accompanying their *first* patent.

"It has been known that the vapors of some, if not all, of these chemical distillations, particularly those of sulphuric ether, when breathed or introduced into the lungs of an animal, have produced a peculiar effect upon its nervous system, one which has been supposed to be analogous to what is usually termed intoxication. It has never, to our knowledge, been known until our discovery, that the inhalation of such vapors, particularly those of sulphuric ether, would produce insensibility to pain, or such a state of quiet of nervous action, as to render a person or animal incapable to a great extent, if not entirely, of experiencing pain while under the action of the knife, or other instrument of operation of a surgeon calculated to produce pain. *This is our discovery.*"

"In other words," says our counsellor, "both the contending parties admit that it was known that the inhaling of ether vapors would produce "a peculiar effect," but deny that it was known that this "peculiar effect" amounted to that extraordinary degree of insensibility—that death of all sensibility—which *the experiments in Boston* demonstrated!"

In the direct face of this conclusion, Mr. D. next goes on to show that it "was known previous to the *experiments in Boston*, that the inhalation of ether would produce insensibility, and to this effect he quotes Dr. Warren, Mr. Hodge, Dr. Chambert, and Dr. Collyer, and remarks as follows: "In the autumn of 1844, Dr. Horace Wells, of Hartford, Conn., came to Boston, and performed an experiment with the direct object of producing, by inhalation, such a degree of insensibility,

as to be useful under painful dental operations. He used the nitrous oxide gas pursuant to the hint of Sir Humphrey Davy.*

This experiment was made before a large company, Dr. Morton being present; and as the experiment was an entire failure, it subjected Dr. Wells to a good deal of ridicule, as well as Dr. Morton, who, being then a student in the Medical College, had introduced Dr. W. to several members.

This experiment and its object were not only known to Dr. Warren and the medical class, but then, or soon after, to Dr. C. T. Jackson and to Dr. Hayward and other physicians; and, in fact, was matter of considerable notoriety, &c. Dr. Warren, in his excellent work on etherization, says that, "in the autumn of 1844, Dr. Wells came to Boston, in company with Dr. Morton, visited me at the Medical College, for the purpose of requesting that the medical class should have an opportunity of hearing some remarks on the use of the nitrous oxyde *for the prevention of pain.* These remarks were actually made, and at a subsequent day a trial of the gas took place." Again Dr. W. states: "Dr. Marcy, of New York, appears to have had communications with Dr. Wells on the inhalation of ether and of nitrous oxyde; the result of which was, that he advised Dr. Wells to suspend the use of ether, and continue his trials with the nitrous oxyde," &c. And yet, say Drs. Morton and Jackson, in 1846, "it has never, *to our knowledge*, been known *until our discovery!* that the inhalation of such vapors (ether or nitrous oxyde) would produce insensibility to pain; this is our discovery!"

Can assurance go further than this? What shadow of reason, then, if either Drs. Morton or Jackson are to be believed, or their claims allowed, (and for a long time each conceded that the other was a joint or co-discoverer, although a disruption has since taken place,) how, we ask, can Mr. D. conclude that it was known previous to the advent of Messrs. J. and M., that "the inhalation of ether would produce insensibility?" "The idea of producing insensibility by inhalation," says our advocate, "for the prevention or mitigation of pain in surgical operations, had been presented on high authority." "Experiments had been made for this purpose, but not satisfactorily, with nitrous oxyde gas, with vegetable decoctions, and with various narcotics; and books had been published on the subject."

This statement is entirely at variance with the facts; for it will appear in the sequel that Dr. Wells had, previous to his visit to Boston, performed many surgical operations while the patients were in a perfect state of insensibility by nitrous oxide gas. Mr. D. continues: "On the other hand, it was *not known*, that the insensibility produced by inhaling *ether*† was of such a character and degree, and governed by such laws, as to be of great value in the most painful operations." (This, be it recollected, was the object of Dr. Wells's visit to, and lecture in, Boston, in 1844, and which he had fully established to the satisfaction of Drs. Ellsworth, Marcy, and the other physicians of Hartford, two years before the Boston experiments.

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* We presume this is the legal way of insinuating that Dr. Wells derived his knowledge of the effects of ether as an anaesthetic agent, from the works of Sir Humphrey Davy; whereas there is not a particle of proof to sustain such a charge,—on the contrary, it is well established that Dr. Wells knew nothing about Davy's hint on this subject. But anything that can serve to detract from the merits of Dr. W. seems all fair and above board.

† Why *ether* alone, why not any gaseous agents?

"What remained to be proved," says the advocate, "was in fact a problem in three parts:

"1. The degree to which this insensibility could be carried.
"2. The safety with which this could be done, and the general effects attending it.
"3. The use this state could be put to, in cases of painful operations."

All these had been proved by Dr. Wells, and communicated by him to Drs. Warren, Morton, Jackson and others, although, as often happens, in the single experiment performed by him at the Mass. Hospital, the gas did not fully take effect, from insufficient inhalation, or some other cause.

Mr. Dana asks, "What is the specific thing that makes this a *discovery?* It is that the inhalation of sulphuric ether will produce *such a degree* of insensibility, that the most severe operation may be performed without pain." Why does Mr. D. limit this agency to *ether*, when Messrs. Jackson and Morton extend it, in their specification, to *all gases* and *vapors* which produce the same effect, when it is not the particular anæsthetic agent which these gentlemen claim to have discovered, but the *fact* that such insensibility can be produced by any one, as to render surgical operations painless? (See specification above.) The reason is obvious. Mr. D. knows that Dr. Wells had employed the *nitrous oxide* successfully in more than 30 cases, two years before Drs. Morton or Jackson were heard of in the matter; that he had also experimented successfully with ether, but gave the preference to the former.

We shall not follow Mr. Dana in his long and tedious argument respecting the comparative claims of Messrs. Jackson and Morton; the profession care not a straw in whose favor, so far as these individuals are concerned, the decision is made; for they regard them both as having laid claim to a discovery to which neither has the shadow of a just right. We therefore dismiss this part of the pamphlet (and it constitutes its greatest portion) as a work of supererogation; for the dispute lies not between these gentlemen, but between them and Dr. Wells; that is, admitting there is any dispute in the case, which we do not, with all candid, impartial men.

We pass on, then, to notice merely what the advocate says relative to Dr. Wells's claim.

He remarks, "1. Dr. Wells makes no claim to the *ether* discovery. His experiments were solely with nitrous oxide."

Remarks.—It matters not, as to the "gist of the discovery," whether Dr. W. experimented with nitrous oxide, or ether; the question in dispute is not relative to *ether*, but as to the discovery of the fact, that *any agent* could produce such a degree of temporary insensibility that a surgical operation could be performed, while the patient remained unconscious of it. This was done by Dr. Wells; and moreover, we have the testimony of Drs. Marcy, Ellsworth, and others, (Bost. Med. and Surg. Journal,) under oath, that he employed both *ether* and nitrous oxide, preferring, however the former. (See Dr. Wells's pamphlets and affidavits.) "When I first made the discovery," says Dr. W., "rectified ether was used, as well as nitrous oxide gas. This is clearly proved by affidavit; but I preferred the latter as being more agreeable to inhale, and less liable to do injury."—(Bost. Med. Journal,

v. 36, p. 299.) *It is not true*, then, that "Dr. Wells makes no, claim to the *ether* discovery," and it would not affect the question at issue in the least if it were.

"2. Again," says Mr. D., "he tried no surgical operation with nitrous oxide, nor knew of any having been tried, nor advised the trying of any."

Now, though we may admire Mr. D.'s boldness in hazarding such a statement as this, there is not a physician in Hartford but who will testify to its falsity. Dr. Ellsworth stated in 1845, (see Bost. Med. and Surg. Journal,) that the dentists of Hartford were in the habit of administering *nitrous oxide gas*, which enabled them to extract teeth without the consciousness of the patient, and that Dr. Wells was the discoverer of this. He made no secret of it; he spent his time and money freely in investigating the subject; he communicated it freely to the world, the Boston faculty, "who ridiculed him," included, and especially his former pupil and partner, Dr. Morton, and he was rewarded by "being subjected to a good deal of ridicule!" "This," the production of insensibility, say Drs. M. and J., in the specification of their patent, "*is our* DISCOVERY: the combining it with, or applying it to, any operation of surgery, for the purpose of alleviating animal suffering, as well as of enabling a surgeon to conduct his operations with little or no struggling or muscular action of the patient, and with more certainty of success, *constitutes our* INVENTION!"

We can only reconcile Mr. D.'s statement, that Dr. W. had "tried no surgical operation with nitrous oxide," &c., with the slightest regard for the truth, except by supposing that he excludes operations in dentistry from the category of *surgical* operations, a distinction neither founded in reason, nor contained in books. Dr. Edward, a staunch advocate also of Dr. Morton's claims, remarks in his communication in the Bost. Med. and Surg. Journal, vol. 36, p. 260, as follows: "That Dr. Wells discovered the fact, that nitrous oxide gas will, in some measure, mitigate pain in surgical operations, I do not deny. But when he argues from thence that he is entitled to all the credit when any one else discovers an equally powerful agent to produce similar or still more perfect results, I must resist his deductions. I cannot see the soundness of his logic or the validity of his deductions." We leave this without comment, only requesting the reader to bear in mind the above extract quoted from the specification of the patent. We stamp, then, the *second proposition* as we do the first, as unfounded in fact, and contrary to what has been proved by affidavit. Whether Dr. W. abandoned his experiments after his visit to Boston, does not affect at all the real merits of the question.

The course of argument of Mr. D., if indeed it deserves such an appellation, in respect to Dr. Wells's claims, is unworthy of any man whose regards for truth outweigh his subserviency to the interests of his clients. After having stated that Dr. Wells experimented solely with nitrous oxide gas, he afterwards admits, as proved by Dr. Marcy's affidavit, that Dr. W. did use ether in his experiments, but gave it up in consequence of the advice of Dr. Marcy. Again: we are told that "in his pamphlets, Dr. Wells makes no claim on the ground of any experiments with ether, nor of any even with nitrous oxide, where there was a *surgical operation*. He confines both his evidence and his allegations to a few cases of extracting teeth under the effect of nitrous oxide gas," &c. (p. 554.) If a position can be sustained by reiterated

misstatements, Dr. Morton may calculate on having his claims fully established. But we doubt, after all, the policy of employing as an advocate a lawyer so ignorant of medical matters as not to know that the extraction of teeth is a surgical operation; for again we are told for the third time, that "Dr. Wells never brought his experiments to the test of a surgical operation, however slight," &c. There is no foundation, moreover, for the statement, that Dr. W. had abandoned the ether inhalation, and had no confidence in it; such a charge made at random, and sustained only by Dr. Morton's evidence, can have no weight with any candid minds. We have Dr. Wells's assurance to the contrary, supported too by the testimony of respectable gentlemen in Hartford, and that suffices for us. Great stress is, moreover, laid upon a letter written by Dr. Wells, dated Oct. 20, 1846, to Dr. Morton. We give the letter entire.

"HARTFORD, Conn., Oct. 20, 1846.

Dr. Morton:

Dear Sir,—Your letter, dated yesterday, is just received, and I hasten to answer it for fear you will adopt a method, in disposing of your rights, which will defeat your object. Before you make any arrangements whatever, I wish to see you. I think I will be in Boston the first of next week, probably Monday night. If the operation of administering the gas is not attended with too much trouble, and will produce the effect you state, it will undoubtedly be a fortune to you, provided it is rightly managed.

Yours in haste, H. WELLS."

The above letter was written in answer to the following from Dr. Morton:

"BOSTON, Oct, 19, 1846.

"Dear Sir,—I have discovered a PREPARATION, by inhaling which a person is thrown into a sound sleep; the time in which persons remain asleep *can be regulated at pleasure*. While in this sleep the severest surgical or dental operations may be performed, the patient not experiencing the slightest pain. *I have patented it*, and am now seeking agents to dispose of the right to use it. I have used this COMPOUND without a single failure in over 160 cases, in extracting teeth. My object in writing you is to know if you would not like to visit New-York and the other cities and dispose of rights.

Respectfully yours, W. T. G. MORTON.

This strikes us as remarkably cool, considering all the circumstances. No one but a man of genius would or could have written such a letter. It is not strange that Dr. Wells was imposed upon. Can any one believe that he, for a moment, imagined that this new "compound" was veritable *ether*, "and nothing else?" Is it strange that he wrote as he did in reply, supposing that a great improvement had been made upon his discovery of the ether and nitrous oxide? Is it wonderful, even, that he went to Boston to see about it? Let it be remembered, too, that at the date of this letter, Dr. Morton had neither obtained nor applied for a patent; his specification being dated Oct. 27th, 1846. Does any one believe that there is any more truth in the other statement of Dr. M. that he had used "this compound" (ether) in 160 cases, without a single failure? It is well that ambition sometimes "doth o'erleap itself and fall on the other side." It is so, emphatically, in the present instance; but truth is omnipotent, and, we have no doubt, will here, as in other cases, finally prevail.

We here leave this subject, and shall not resume it; our sole aim has been to vindicate the claims and memory of a man who is now remo-

ved beyond the sphere of praise or censure, although in doing so, we run the risk of offending those whom we are proud to rank among our friends. But justice must be done, though the heavens should fall. As a public journalist, we have a duty to perform to which all private considerations must yield. We have ever endeavored to perform it without fear or favor, and we shall continue to do so to the end. We should have regarded Messrs. Morton and Jackson's claims with, perhaps, more patience, if they had not, from the first, endeavored to appropriate the discovery of Dr. Wells to their own individual emolument. We can never forget the tenacity with which they held on to their *patent rights*, until they became convinced that they could not enforce them; when they made a virtue of necessity, and voluntarily relinquished what they could no longer hold.—*Fiat Justitia.*

ART. XII.—*Principles and Practice of Surgery.* By the late GEORGE McCLELLAN, M. D., edited by his son, JOHN H. B. McCLELLAN, M. D. Philadelphia: Grigg, Elliot & Co., 1848, 8vo. pp. 432.

THIS work, the offspring of the genius, erudition and experience of the late George McClellan, constitutes an important addition to surgical science. We knew the author well—for he was one of our early friends—and we cannot but deplore his early loss as a public calamity.

Dr. McClellan was of Scottish origin, and born at Woodstock, Conn., on the 22d of Dec., 1796. His grandfather was one of the honored soldier patriots of the Revolution, and his father a gentleman of intelligence and worth, devoted to the manufacturing and agricultural interests of the country. He graduated at Yale College in 1815, at the early age of 18 years, with a high reputation for scholarship, especially his knowledge of the natural sciences. Soon after leaving college, he commenced the study of medicine with the late Dr. Thomas Hubbard, of Pomfret, Conn., afterwards Professor of Surgery in the Medical College of New Haven. In 1817, he repaired to Philadelphia to attend the lectures in the University of Penn., where he became the private pupil of the late Prof. J. S. Dorsey, at that time Prof. of Materia Medica in that Institution. In 1819, Mr. McClellan received his Doctorate, the subject of his thesis being "The Tying of Arteries," a production which foreshadowed his reputation as one of the master spirits in surgery. In 1821, he married into one of the most respectable and influential families in Philadelphia, and immediately established himself as a practitioner in Walnut-street; at the same time engaging in the delivering courses of lectures on Anatomy and Surgery. Our acquaintance with Dr. McC. commenced a few years subsequently to this period, and soon after the opening of the Jefferson Medical College. The vivacity of his manner—his extraordinary fund of knowledge on all professional subjects—his animation and eloquence as a teacher and lecturer—his unequalled buoyancy and exuberance of animal spirits—his boldness and skill as an operator—his impulsive and energetic manner—the originality of his conceptions—the cordiality and frankness of his deportment—the generosity and nobleness of his nature—all these impressed us most favorably, and led us to anticipate for him that success and renown which afterwards crowned his persevering and unsurpassed efforts. For the space of fifteen years, Dr. McC. delivered

annual courses of lectures in the Jefferson College, to constantly increasing classes, and he lived to see the school of his own creation, first in point of numbers on this side of the Atlantic. In 1838, he retired from the Jefferson School, and became a private teacher; in 1839, he established the Medical Department of Pennsylvania College. At what time he resigned his situation in this school, we are not informed, nor of the causes which led to his retirement. We saw him, with firm and elastic step, walking rapidly in Chestnut-street, on the 7th of May last, at the meeting of the Medical National Convention; on the 9th, two days after, he ceased to breathe. His disease was ulceration of the bowels, terminating in perforation and peritoneal inflammation.

The failings of Dr. McC., such as they were, "leaned to virtue's side." He was generous to a fault; he was frank and honest to the very borders of imprudence; he was open and straight forward to such a degree, as to be called unwise and impolitic; he was impulsive to that extent, as almost to appear—at times—insane. And so also in surgery, as an operator, he was so novel and bold, as to be thought rash and dangerous; his conceptions were so rapid, as to render him liable to the charge of acting precipitately and without due reflection; burning with the true zeal of surgical science, his ardor may have caused him sometimes to o'erleap some of the conventional usages of the profession; but after all, his heart was in the right place; he was magnanimously generous, and transparently unsuspicious; guileless, unceremonious; a surgical hero, whom Carlyle would delight to honor.

Dr. McC. has not been a voluminous writer. He reported several of his important surgical operations for the American Medical Recorder; afterwards he became one of the conductors of the American Medical Review and Journal; he edited Eberle's Theory and Practice of Physic, with Notes. And here we have the crowning work of his life, filled with the erudition and rich experience of a life of study, reflection and observation; a work of undoubted genius and high practical value; enriched with the established principles of surgical science; and illustrated, enforced and adorned with facts and cases gathered from the bedside.

This work of our lamented friend is destined, we doubt not, to surprise those who deemed its author inconsiderate, inconclusive, and wanting in method. It shows him to be a logical and profound thinker, a close and accurate observer; a concise, elegant and classical writer. He has taken rank among the *dii majores* of our profession; and no spirit of envy or jealousy can pluck him thence.

It would give us pleasure to present an analysis of this treatise, but our limits forbid. The precepts inculcated will be found eminently practical and judicious, and the illustrative cases in the highest degree interesting—nothing more graphic, of a surgical nature, has appeared since the days of John Bell, than many parts of the work. The writer evidently describes, *con amore*, what he has seen, and tells what he knows. There is nothing of a speculative or theorizing character in the book; all is practical, plain, common-sense teaching; such as always characterizes great minds, thoroughly imbued with knowledge. The work richly deserves a place in every medical library: students could hardly desire a better text-book.

ART. XIII. *The Lungs—their Uses and the Prevention of their Diseases;* with Practical Remarks on the use of Remedies by Inhalation. By JAMES STEWART, M. D., etc. Wm. H. Graham. 12 mo. pp. 100.

THIS work contains many very valuable directions respecting the proper use of the lungs for the prevention of the various diseases to which these organs are subject, together with the result of the author's experience in the use of inhalations in their treatment for several years past. Dr. Stewart has had vast opportunities of making himself acquainted with the effects of various professions, trades, etc., on the respiratory organs, and the importance of full, free and profound respiration in maintaining the health of the body: these opportunities he has diligently improved, and presented to the profession in this work. On the subject of the use of the lungs as a preventive of pulmonary disease, he remarks:

"It is well known, that the more an organ is exercised within the bounds of its legitimate use, the more will it be developed, and the better will it be prepared to discharge its proper functions. The perfections of the limbs of a professional dancer, and the wonderful movements and delicate accuracy of the fingers of the artisan or musician, are familiar examples of a state of perfection from habitual use. In these and similar instances, a full development of the function of the member accompanies the physical development of all its parts. It may also be considered an axiom, that the more perfect an organ is in its development, the less is it liable to disease. These principles are fully applicable to the lungs, and a disposition to disease may often be arrested by their judicious use, in voluntarily assisting them in the development of their parts.

A contracted form of the chest gives evidence of an imperfect development of the lungs, or of their partial contraction from previous disease; and these organs can never be disproportionately less than other parts of the body without the individual experiencing general debility, and, sooner or later, the invasion of disease. A very simple method of developing the parts concerned in the important function of respiration, is the practice of inflating the lungs daily by a full inspiration, and then allowing the air inspired to return slowly by compressing the lips. The air cells will thus be completely filled and slowly emptied, whereby their gradual enlargement will be effected. This should be done at stated periods, morning and evening; five or six inspirations at each time, if persevered in for a few weeks, will render the effort an agreeable one, from the sensation which the exercise of the full power to respire always produces. The patient should first assume an erect posture by placing the back, shoulders and head firmly against the wall of the apartment. I have known the chest of one who had every appearance of incipient consumption, expand under this process so as to be decidedly appreciable by a tailor's measure in a month; and a year's perseverance in this course has produced a visible alteration in the form and size of the chest, giving the individual that sturdy appearance which is the usual attendant upon a complete development of the lungs.

"The removing, also, of an extreme susceptibility and delicacy of the lungs, and thereby preventing their becoming diseased, is one of the most striking results of a systematic perseverance in exercising the respiratory organs. I have known those who have uniformly been attacked with cough in the fall of the year for several years in succession, entirely relieved from this effect of a change of temperature, and to remain totally free during all seasons and on every change of weather, although constantly exposed to all the vicissitudes which occur in active life. In one individual the lungs were so quickly affected by the cold air of a winter's night upon issuing from a warm room, and so contracted, that it was almost as difficult to breathe as in an attack of

spasmodic asthma. After practising carefully and upon correct principles the inflation of the lungs for a few months, every vestige of this susceptibility to cold disappeared; and at the present time the most violent and coldest north-west wind causes not the slightest feeling of his old complaint."

We have only room for the introductory remarks to the use of inhaling remedies.

"*Fumigations.*—Fumigation, or inhaling the smoke and vapor of certain substances, has, from time to time, been recommended; but the careless and rough manner in which it has been performed, and the want of discrimination in the diseases for which it has been recommended, has caused it to be, at present, almost entirely neglected. Indeed, *fumigation* can scarcely be applicable to diseases of the lungs; the structure of which is so delicate that the minute particles of which smoke is composed, finding their way into the air cells, become a source of irritation to the lungs. In smoking tobacco or stramonium for asthma, the unburnt particles accompany the essential oil of the plant, in the form of smoke, and not unfrequently defeat the object desired. So, also, with fumigation of tar: the mode of preparation recommended by Sir Alexander Crichton, by the direct application of heat, extricates also the products of imperfect combustion. In some affections of the lungs, great relief has been experienced; but in some forms of the same disease, complete disappointment has ensued, resulting from the cause already mentioned, connected with a want of sufficient care in examining the precise condition of the lungs.

"The neglect of a proper discrimination in the disease has led to repeated failures in the use of the means referred to. Thus fumigation with tar has been used in "consumption." There can scarcely be anything more indefinite than this term to convey an idea of the state of the lungs. Some persons with "consumption" may have so active an inflammation of some portions of the lungs or air passages as to render the remedy altogether inapplicable. So with asthma; if a suitable and careful investigation be not made, the fumes of tobacco may be ignorantly applied in the congestive form, and not in the spasmodic. The smoke of rosin has been advised for chronic cough; but if the actual condition of the mucous membrane of the air tubes is that of inflammation in any degree, it will greatly aggravate all the symptoms. Indeed, fumigations are applicable to but few conditions of these parts; but all the appropriate remedies can be breathed into the lungs through the medium of watery vapor, without producing any of the evils of an extraneous substance.

"*Vapor of Water.*—As water is freely formed in the lungs, and as they are always bedewed with its vapor, it is obvious that this is the most natural substance that can be placed in contact with them. It is, therefore, but following the indications of Nature to use it as a medium for applying the requisite remedies, and thus escape the hazard of employing irritating and uncongenial substances which must enter the lungs by smoking or fumigation."

ART. XIV.—*Memoire sur les Rétréeisements Organiques du Canal de l'Urètre et sur l'emploi de noveaux Instrumens de Scarification et d'Incision, etc.* Par MARTIAL DUPIERRIS. Paris.

THIS volume comprises the results of the author's more mature experience in the cure of strictures of the urethra by scarification. His first observations were inserted in the Bulletin Thérapeutique, in 1839, since which time he has devoted himself exclusively to this mode of treatment, to the exclusion of all others. In ch. 7 he thus expresses himself: "Scarifications act as resolvents and irritants; they produce on the surface of ulcers a plastic exudation, which proceeds from the circumference to the centre, when the ulcer is cured without disturbing the neighboring parts. The words of Lisfranc, in his lessons on the

simple ulcer, contain in few words the history of scarification; they express perfectly, as we think, the idea that should be formed of this therapeutic agent, if we have correctly observed its effects. Most authors view scarification only as a mechanical action, analogous to dilatation, and whose sole action is to enlarge the canal from the centre to the circumference: this is, as we think, only to contemplate a part of its effect. The urethra, when strictured and subjected to scarification, recovers the capacity, elasticity, and sensibility it had lost, by the contraction of which it is the seat; and of necessity in arriving at its natural state, passes through a series of vital modifications, which are far more effective in curing than the mechanical dilatation."

The author adduces high names in favor of his favorite plan of treatment—Civiale, Ricord, Malgaigue, and others; and gives plates of four very ingenious instruments for effecting the scarifications.

How far they will prove effective, and whether this plan ought to supersede mechanical dilatation, with the occasional use of caustic, time will develop; for ourselves, we have our doubts; the admirable effect of pressure in removing lymphatic deposites, and caustic in resolving congestion and thickening of the palpebræ, (which present so much analogy in their pathological condition to that of stricture,) induces us to wish for more light before we adopt this practice, to the exclusion of other well-tried means. Yet we must adopt the author's motto: "The clinical register is the touchstone of theories." There is an appendix detailing the results of the author's mode of cure by softening or "malaxation." It consists of introducing as large a sound as possible for thirty or thirty-six hours, more or less, and then subjecting the stricture to pressure three or four times daily, in different directions, and for a short time with the fingers; during which process, should there be too much irritation, the warm bath is occasionally used. This mode is said to have been completely successful in three cases. Again, we doubt its efficacy in many cases, and refer to the author's motto.

ART. XV.—*A Descriptive Catalogue of the Anatomical Museum of the Boston Society for Medical Improvement.* By J. B. S. JACKSON, M. D., Curator of the Museum, Prof. of Pathol. Anat. in Harvard University. Boston: W. D. Ticknor & Co. 1847.

DURING a recent visit to Boston, we were favored by the author of the present publication with an opportunity of examining the museum herein described; and we hardly know how to express our estimate of its value, or our obligations to the accomplished Curator for his kind civilities and his aid in identifying the different specimens. This collection in morbid anatomy, one of the most extensive and valuable in this country, has been gradually made by the members of "The Boston Society for Medical Improvement," an association founded in 1828, and which has held meetings regularly, twice a month, to the present time. At these meetings, beside the reading of an original paper, interesting cases are detailed, of which a full report is made by the Secretary; and from these reports the present volume is made up, and from a selection of the specimens thus exhibited, the cabinet of the Society has been mainly formed. The peculiar interest attached to the collection is de-

rived from the fact, that, in most instances, the specimens are accompanied with authentic histories of the cases from which they are derived.

The first seventy-six specimens described are those of *healthy bones*; showing their development and structure, the effects of age, anatomical varieties, and national sculls. The second section treats of *diseased bones*, numbering 237 different specimens, and exhibiting every variety of morbid appearance; this portion of the collection is extremely interesting and extensive. There are 16 specimens described, exhibiting disease of *the soft parts about the joints*; 61, of disease of the *heart and blood-vessels*, embracing every form of cardial affections; 42, of disease of the *organs of sense*; there are 27 cases of disease of the *vocal and respiratory organs*; 83, of the *alimentary canal*; 50, of the *organs accessary to the alimentary canal*; 63, of the *urinary organs*; 36, of the *female organs of generation*; 22, of the *male do.*; 47, of *utero-gestation*; 122, *monstrosities*; 32, *parasites*; and 23, *miscellaneous*. Besides all these, which are beautifully put up and preserved, the Museum contains an extensive collection of Chinese paintings, presented by Dr. Hooper, accompanied by nearly a complete history of the cases, forming a rich series of illustrations, far more valuable than any preserved specimens of disease, and which nothing could equal but an examination of the patients themselves. There is also an extensive suite of casts on the shelves, representing malformations and diseases of various character. When to these are added the beautiful anatomical preparations and models of disease presented by Dr. Shattuck, it is but just to say, that a richer collection in healthy and morbid anatomy cannot be found in this country, and that great credit is due to the Society for the example thus placed before the profession for imitation in other places; and more especially to the indefatigable Curator, to whose diligence, unwearied assiduity and enlightened zeal we owe the present volume. Although especially useful to the members of the association, and those who have access to the cabinet, it is an extremely interesting and valuable work to any physician, for its accurate histories of cases, and graphic description of morbid appearances. The part relating to monstrosities will perpetuate the name of the author, as ranking next to Geoffroy St. Hiliare in this department of science. It is but a simple act of justice that such men should be rewarded; and it speaks well for the profession, when we see modest merit and unpretending science thus crowned with the highest honors.

ART. XVI.—*Ophthalmic Memorandæ respecting those Diseases of the Eye which are more frequently met with in practice.* By JOHN FOOTE, M. D., &c.—New York: S. S. & W. Wood, 261 Pearl-street. 1848. 18mo. pp. 131.

WE here have a very useful little manual on Ophthalmic Diseases, drawn from the highest sources, and the best authorities, in the personal experience of the author, altogether forming a very convenient book of reference to the student and practitioner of medicine. There is no subject connected with the eye, passed over; and the rules of treatment laid down are in a high degree safe and judicious.

ART. XVII.—*The Medical Practitioner's and Student's Library.—The Principles and Practice of Midwifery.* By DAVID H. TUCKER, M. D., Prof. of the Principles and Practice of Medicine, &c. With numerous illustrations. Philadelphia: Lindsay & Blakiston. 1848. 12mo. pp. 405.

Elements of General Pathology. By ALFRED STILLÉ, M. D. etc. Philadelphia: Lindsay & Blakiston. 1848. 12mo. pp. 483.

THESE two works form the commencement of a series of practical essays on Medicine, Surgery, and the Collateral Sciences, adapted to the use of students and medical men; and which may be afforded at a more reasonable rate than works on medicine have heretofore been furnished. The design is a laudable one, deserving of the cordial approval and patronage of the profession, and destined to be crowned, as we believe, with unequivocal success.

These two volumes, at least, argue well for the success of the enterprise on which the worthy publishers have entered. They present within a moderate compass the substance of many ponderous tomes and monographs, condensed, systematized, and arranged, in a very able and satisfactory manner. Dr. Tucker, for example, has given us in the space of 405 12mo pages, (price $1 25,) one of the most complete and satisfactory digests of obstetrical science and art, to be found in the language; and the same remark will apply to the truly scientific and philosophical essay of Dr. Stillé on general Pathology. Both of these gentlemen have done themselves great credit for the skill and judgment with which they have worked up the vast materials at their command; setting forth all the acknowledged facts connected with the subjects of which they treat, with great perspicuity and force, and yet without that minuteness of detail which wearies while it does not instruct. The style is plain, concise and intelligible; the principles, those which are now admitted by the ablest authorities. Should the remaining works of the series, on *Minor and Clinical Surgery, Special and General Anatomy, Physiology, Medical Chemistry, Materia Medica and Therapeutics,* and *the American Dissector,* be equally well executed, the profession will be furnished with a complete *multum in parvo* library of medicine, at such a rate as to be within the reach of all, and of such a character as to merit general patronage.

ART. XVIII.—*On the Theory and Practice of Midwifery.* By FLEETWOOD CHURCHILL, M. D., &c., With Notes and Additions, by R. M. HUSTON, M. D., etc. 3d American Edition, revised and improved by the author. With 128 illustrations. Philadelphia: Lea & Blanchard, 1848, 8vo. pp. 521.

As we have formerly called the attention of our readers to the extraordinary merits of this work, we need only add, that it continues to occupy the foremost rank among publications connected with the obstetric art. The Editor has added also to its utility by posting up all the new facts and observations which have transpired since the appearance of the last edition.

ART. XIX.—*Obstetric Tables.* Comprising Graphic Illustrations, with descriptions and practical remarks; exhibiting on Dissected Plates, many important subjects in Midwifery. By G. SPRALL, Surgeon Accoucheur. First Am. Edit., carefully revised, and with additional Notes and Plates. Philadelphia: Thomas, Cowperthwaite & Co. 1848. 4to.

WE cannot better convey our own impressions relative to the merits of this beautiful work, than in the words of the American editor. "Its superiority over any other series of obstetrical illustrations, is universally admitted. It is a happy combination of the *Picture* and the *Model*, combining the convenience of one with the completeness of the other. To the busy practitioner, who wants something to refresh his memory, it obviates the necessity for continual *post mortem* examination, by supplying every point of reference he can possibly require; to the student it is equivalent to a whole series of practical demonstrations, with the advantage that it can be carried about with him and studied wherever he may desire.

"This is particularly the case with the plates explaining the use of the instruments. No *single* pictures could ever convey the ideas, and enable the student to understand the descriptions; but these dissected plates are almost equal to the mannikin itself. The newly-added representation of the Cesarean operation, is another instance. The *best* views of that operation, while standing alone, are almost as likely to mislead as to guide correctly. This plate, however, exhibits the whole process in so complete and connected a manner, that nothing can be misunderstood."

This work enjoys a high European reputation, higher perhaps than any other of the kind. The American artists, Messrs. Wagner & McGuigan, have executed their part of the task with great fidelity and skill, while the American editor has added some useful notes, designed to supply all deficiencies in the original, and bring the work up to the present state of obstetrical science. As this is the *only* work of the kind yet published in America, we trust it will receive ample encouragement from the profession.

ART. XI.—*The Young Stethscopist; or, The Student's Aid to Auscultation.* By HENRY J. BOWDITCH, M. D., one of the Physicians of Mass. Gen. Hospital. 2d Edition. New York: S. S. & W. Wood. 1848. 12mo., 303.

DR. BOWDITCH has the honor and credit of having given to the profession one of the most concise, clear and comprehensive works, on physical diagnosis, hitherto published in any country. It is limited chiefly, it is true, to the physical signs, but the physician can easily comprehend the relations they ought to bear to the rational signs, so that the omission is not perhaps of any great consequence. We agree with the author, that in most works of the kind there are too many minute distinctions in regard to particular sounds, a diffuseness of detail that serves to discourage rather than allure onward in the study of auscultation. This fault has been happily avoided, and the result is a work of peculiar value to the student and practitioner of medicine.

ART. XXI.—*Transactions of the Medical Society of the State of New York*, vol. 3, part 1. 1848. 8vo. pp. 84.

THIS number of the yearly Transactions of our State Medical Society contains several articles of an interesting nature; among which are two addresses by the President. Dr. T. W. Blatchford; an Essay on Diseases of Saratoga County, by Dr. Brisbin; an Address before the Columbia County Medical Society, by Dr. Bates; Observations on Agriculture in its bearings on Medicine, by Dr. Alexander Thompson; on Diseases of Otsego County, by Dr. J. S. Sprague; Remarks on the Influence of Dress, by Dr. W. D. Purple. The Appendix contains the usual Abstract of Proceedings, &c. The meetings of the Society are evidently increasing in interest year by year; but there is still room for the display of a little more of the *esprit du corps*, which ensures progress in every calling and profession in life.

Did our space permit, we would gladly quote from the annual address of the able and learned president, Dr. Blatchford, which is characterized by great originality and quaintness of style, and richness of material. Our expectations were by no means moderate, but we deem it proper to say that they have been more than realized. Our State, prolific as it is in great men, has few superior to the accomplished author of the Discourse on Temperaments.

ARTXXII. *On the Causes and Treatment of Abortion and Sterility;* being the result of an extended and practical Inquiry into the Physiological and Morbid Conditions of the Uterus, with reference especially to Leucorrheal Affections and the Diseases of Menstruation. By JAMES WHITEHEAD, F. R. C. S., etc. Philadelphia, Lea & Blanchard. 8vo. pp. 370.

THERE is no class of diseases more interesting to the general practitioner than those connected with the function of reproduction; and we are acquainted with no work which treats of them in a more clear and satisfactory manner than this. It is chiefly occupied in a description of the phenomena, healthy and morbid, connected with menstruation; the conditions which influence it at its commencement; its diseases, and the last menstrual crisis; the signs of pregnancy; abortion, its statistics, causes and treatment; lastly, sterility, its causes and treatment. We can confidently recommend this work to the profession, as embodying an immense amount of practical information of the highest value, the results of careful observation and scientific investigation, and for which he will seek in vain elsewhere.

ART. XXIII.—*Practical Observations on Certain Diseases of the Chest, and on the Principles of Auscultation.* By PEYTON BLAKISTON, M. D., F. R. S., &c. Philadelphia: Lea & Blanchard, 1848.

THIS is an octavo volume of 384 pages, the first 83 of which are devoted to Auscultation and Percussion; and the remainder of the volume to Thoracic Aneurisms, Chronic Pleurisy, Plastic Pneumonia, and Phthisis Pulmonalis. We have not had it in hand long enough to read it, much less to make an analysis of its contents. N. S. D.

ART. XXIV.—*On the Blood and Urine.* By JOHN WILLIAM GRIFFITH, M. D., F. L. S., &c., G. OWEN REES, M. D., F. R. S., F. G. S., &c., and ALFRED MARKWICK, M. D., &c. in one volume. Philadelphia: Lea & Blanchard, 1848.

THIS is an elegant octavo volume of 460 pages, containing three essays, by the three gentlemen whose names are given above. The first, by Dr. Griffith, "contains a description of the General, Chemical, and Microscopical Characters of the Blood and Secretions of the Human Body, as well as of their components, including both their healthy and diseased states; with the best methods of separating and estimating their ingredients; also, a succinct account of the various concretions occasionally found in the body and forming Calculi." The second, by Dr. Rees, is "On the Analysis of the Blood and Urine in Health and Disease; and on the treatment of Urinary Diseases." The third, by Dr. Markwick, purports to be "A Guide to the Examination of the Urine in Health and Disease, for the use of Students." Though the late hour at which this work came into our hands, precludes our expressing any opinion of its real merits, yet we have no doubt that it will be found an interesting and useful volume. N. S. D.

PART THIRD.

American Intelligence and Editorial.

THE AMERICAN MEDICAL ASSOCIATION.

While the present number of our Journal is passing through the press, the first Annual Meeting of the American Medical Asociation is in session at Baltimore. We learn from various sources that there is a very full representation of the profession present; and that the proper business of the Association is progressing with much harmony and good feeling. The election of officers took place on the second day, and resulted in the choice of Dr. Alexander H. Stevens, of this city, for President; Dr. Wm. M. Awl, of Columbus, Ohio, Dr. J. C. Warren, of Boston, Dr. Saml. Jackson, of Philadelphia, Dr. Paul F. Eve, of Georgia, Vice Presidents; Dr. A. Stillé, of Philadelphia, and Dr. H. J. Bowditch, of Boston, Secretaries.

We are also informed that all the standing committees are prepared with full and interesting reports on the various subjects referred to them. But a particular account of the proceedings must be deferred until our next number, when we shall be able to lay them before our readers in an official form.

N. S. D.

Medical Department of the University of Michigan.—We are informed, by a communication from one of the Regents of the University of Michigan, that at a recent session of the Board, measures were adopted for organizing and carrying into operation the Medical Department of their State University. The plan they have adopted closely resembles that of the University of Virginia, at Charlottsville. Their Medical Term continues throughout the year, with only the same vacations as in the Literary Department. They have resolved to commence the operations of the School with only *three* Professors, filling up their number as the funds of the University will permit. Two have already been appointed, viz., Drs. Abram Sager and S. H. Douglass, both of whom are also Professors in the Literary Department of the Institution.

The University is well endowed, by means of the public lands, and is founded on the most liberal basis, the only College expenses being an admission fee of $10, and a charge of from $5.00 to $7.50, per annum, for room rent and janitor fees. The tuition is free. Whether these terms extend to the Medical Department, as well as the Literary, our information does not enable us to state positively.

The Regents have also taken high ground in regard to their *standard* of requirements, and have very judiciously provided for an independent Board of Censors to examine all candidates for the honors of the Medical Department. The Institution is located at Ann Arbor, and we certainly wish it a long career of prosperity and usefulness.

N. S. D.

May 4th, 1848.

Statistics of the New York Institution for the Blind.

The following Statistics of the New York Institution for the Blind, with which we have been politely favored by the able and intelligent Superintendent, will be found highly interesting.—Ed.

Inst. for the Blind, Sept. 27, 1847.

Charles Lee, M. D.:

Dear Sir,—Below you will find the statistics you request, so far as it is in my power to furnish them. I have no means of ascertaining the number of *servants* previous to 1840. The numbers which I have set down are a *probable estimate*, taking the *proportion* of subsequent years as a basis.

Year.	No. of pupils	Officers.	Servants.	Total inmts	Deaths	Age at time of decease.	Diseases.
1832	7	2	1*	10	1	10	Cholera.
1833	16	4	2*	22			
1834	26	4	4*	34			
1835	41	6	6*	53			
1836	51	6	8*	65			
1837	64	7	9*	80	1	18	Consumption.
1838	63	7	9*	79	3	20, 17, 10	2 Consumption and 1 ulcer of bowels.
1839	69	7	10*	86	1	16	Consumption.
1840	72	7	10	89			
1841	68	7	12	87	2	17, 21	Consumption.
1842	76	8	10	94	2	32, 28	Consumption.
1843	87	7	12	106	1	21	Ulceration of bowels.
1844	111	7	14	132			
1845	125	7	17	149	4	23,11,12,12	3 ulceration of bowels and 1 consumption.
1846	125	9	18	152	1	16	Ulceration of bowels.
Partial 1847	128	8	17	153	1	14	Hydrocephalus.

The deaths have been *confined* to the pupils, no officer or servant having died while discharging their duties at the establishment. The current year, being imperfect, is marked "*partial*." The Institution was established in 1832.

Considering the indisposition, and as well as the inability of the blind to take much active exercise in the open air, their constitutions, in the case of those *born* blind, often *naturally feeble*, and in others impaired by the disease which destroyed the sight, or the treatment to which the patient is often subjected to restore it—I think the proportion of deaths in our Institution very small. Out of 282 that have been inmates of the establishment since it was founded, so far as I am able to ascertain, only 26 have died, including the deaths at the Institution and those abroad.

It will give me pleasure, sir, to afford you any further information that may be in my power.

Very respectfully, yours,

James F. Chamberlain,
Supt. N. Y. Inst. for the Blind.

Chloroform.—We acknowledge our obligations to Prof. Simpson, of Edinburgh, for several pamphlets relative to the use of ether and chloroform in midwifery practice; the last entitled "Remarks on the alleged fatal case of Chloroform Inhalation," as reported in the London Lancet of Feb. 12. We are extremely gratified to learn that Prof. S. has continued to use chloroform in obstetric practice with uniform success, up to the present period; and if the same results attend its use in the practice of others, it will prove one of the most valuable gifts ever bestowed by science upon the human family. Our fears, we acknowledge, have hitherto prevented us from having frequent recourse to it; but where we have, we are free to confess we have seen no harm result from its employment. Like all other powerful agents, it must be used with extreme caution, and only after a most thorough investigation of the condition of the patient, and all the circumstances of the case. The state of the lungs and heart can never be passed by, without incurring great danger.

MARSH MIASMATA.

The facts contained in the following article, taken from that most excellent periodical, the "American Journal of Agriculture and Science," are so appropriate at this time, when some writers seem disposed to deny altogether the existence of such a thing as Marsh Miasmata, that we cannot forbear giving them to our readers. And as the language of the writer cannot be abridged without obscuring the statements, we quote the article entire.—Ed.

MARSHES AND THEIR EFFECTS ON HUMAN HEALTH.—BY WILLIAM BACON.

I have recently noticed a valuable article on "marshes and their effects on human health," taking the rounds of the press, and appearing to have originated in your valuable periodical. Facts corroborative of the assertions of that article, are so freshly dated in my recollection, and so mournfully impressed on the minds and yet bleeding hearts of many in this community, that it appears to me proper to throw them into the same channel, that perchance the tide may bear them onward, so that they may contribute to the protection and preservation of human life.

In the outset, it may be convenient for the reader to become acquainted with our geographical and geological features. First, then, we are situated on the western line of Massachusetts, with the Taconic hills on our western boundary. These hills, from the gap where the western railroad passes them, rise as you pass northward, until it reaches an elevation of more than 2000 feet above tide-water, and about 1000 feet above the level of the railroad. The streams that rise from this hill mostly take a south-easterly direction, and their course is marked with ravines as is usual along mountain streams. Half a mile north of the Congregational church, one of the deepest of these ravines opens into the valley, and from its debouchure the mountain widens to the east. Still further north, at about the same distance, it makes another offset, and yet another from Lebanon gap, where its southern front makes an east-north-east direction. Lenox mountain is our eastern boundary, and its general course is a south-west direction. So it will be seen, that our only outlets are formed by narrow valleys on the north-east and south-west. Lenox mountain is abrupt on its western surface; the Taconic passes down in a more gradual slope, so that cultivation is carried to its summit. On the eastern borders of the town, lands *convenient* for tillage are higher than corresponding lands in the west part by some forty or fifty feet. Thus described, our territory presents the form of a basin, with a north-eastern and south-western outlet. Through this basin lies an almost unbroken line of swamp, in some places, to be sure, too much elevated to become the receptacle of stagnating waters and vegetable substances gathered to decay. Through and in the immediate vicinity of this low land, passes the western railroad, on which operations were commenced in 1838.

The place had been remarkable for the health and longevity of its inhabitants from its early settlement, which commenced about the middle of the last century. Influenzas, to be sure, were sometimes prevalent, and consumptions carried their victims to the grave in good old age. But fevers were of so rare occurrence, that visitations from them were seldom feared.

The autumn of 1840, however, was destined to open a new era in our statistics of health, for that season the typhoid prevailed with almost unmitigated malignity, in the neighborhood to which its operations were mostly confined. Scarcely a house would be passed in which some of the inmates were not smitten, and in many of the dwellings death found his victim. The territory where the disease prevailed most, was about a mile and a half in length, along the base of the Taconic, and its ravages were principally confined to one street, though there were many severe cases in other parts. It was in vain that the origin of the disease was sought, and equally vain and futile were many of the causes to which its existence was then attributed.

Those who remember the summer of 1840, will recollect that in western

Massachusetts and eastern New-York it was a season of much heat and great drought. Those who saw the operations of grading the railroad through this region know very well, that in raising the embankments through the swamps, especially the lower one, that seemed almost a bottomless abyss, the sinking of the earth carried on, caused much decomposing matter to be thrown up and exposed to the influence of the sun through that hot dry summer. The early rains of autumn were in no way calculated to retard the decomposing process to which these huge masses of matter had been exposed by the chief of nature's causes, and hence it is not strange that the atmosphere became infected with poison too foul to breathe.

But the inquiry comes up, if the atmosphere was infected with the seeds of dreadful diseases, why were its operations so generally restricted to a given district? The reason is conclusive: scarcely a morning passed, from the middle of August until cold weather came on, but that a dense cloud of fog might be seen extending along the line of the railway through the town.

And very often, as the morning fog passed off, it might be seen from the upper parts of the town, to follow up the streams that originate at the west mountain, and remaining longest over the precise territory where the disease principally prevailed, and with a density so great, that its upper surface, as seen from the eastern hills, did not appear to reach higher than half the altitude of the mountain.

But these miasmatic vapors were in nowise limited to morning visitations; they often came on at early evening, and made sure their sojourning through the night, and no doubt kept the whole atmosphere continually polluted with their poison, which the taste or smell of a person out and exposed to its influence could readily detect. The fever of 1840 continued, to a certain extent, to prevail until mid-winter, and perhaps a few cases after that time; but a majority of them occurred between the first of September and the middle of December.

Usual health prevailed in the place through the following spring and summer, which, like the corresponding seasons of the previous year, were marked with unusual drought. But in early autumn the sickness again commenced, extending over the same territory, and in many cases attended with similar fatal results. The railroad was completed and put in operation early in 1841, consequently the throwing up of these swampy lands was pretty much ended. But the poisonous effluvia of earth already disturbed was not removed, and the action of the elements upon it again produced similar results. In 1842 a few cases of the fever occurred, but the number, compared with that of the two previous years, was diminished at least seventy-five or eighty per cent.; and the number diminished yearly, as nature removed the cause by giving frosts and rains to stop the progress of the great body of vegetable decomposition, which had charged the atmosphere with its poisonous qualities.

We have already remarked, that the surface of the town, as seen from the surrounding hills, pretty nearly marked the form of a basin. The curious will inquire then, why the fever did not extend all over the place. The reason is conclusive. The fogs, after they had risen, passed down the railroad track to the lower swamp, which was broken up the deepest, and from this it passed up the lowland in a westerly and north-westerly direction, until its progress was arrested by the west hills, where it remained stationary until its fatal qualities were discharged in quantities sufficient to produce the effects already mentioned.

The cases east of the railroad were few, a circumstance which may conclusively be attributed to the circumstance that these deadly fogs seldom passed off in that direction. Two causes for this result. First: the streams from the east mountains, the most, indeed with one or two exceptions all of them, pass off without any communications with these swamps, consequently there are no such direct channels for the ascent of vapor in that direction as on the west. The region on the east is more elevated of the two, which likewise operated as a barrier to its approach if natural causes have effect, which we leave to others to decide. Second: the seasons were at-

tended with frequent easterly winds, which, of course, drove the vapor in a westerly direction. But it was not always in the presence of the east winds that the fogs were most dense or longest in continuance. On the contrary, in the still atmosphere, the vapor passed off, as in natural channels, until its progress was arrested by the mountains, against whose sides it hung like a heavy cloud until the sunshine and its own exhausting power dispelled it.

We have been particular in the foregoing relation of the cause and effect of a miasmatic atmosphere, arising from impure exhalations from lowlands, because the case was so strongly marked, that it would appear that no mistake could be made in the matter. What we have shown to have been on a large scale, no doubt, in oft repeated instances, exists in smaller ones. A frog pond near a dwelling, a sink or cispool, where accumulating matter is allowed to decay, may be as fatal in its limited operations as was this wholesale dealing out of malignant vapor on a district where health in previous years had been a distinguished quality of the climate. How far such visitations may be remedied by timely researches and proper precautions, is not for us to say. We leave it for an enlightened and sagacious public to draw their own inferences, and make such application as in their wisdom appears most proper.

Richmond, Mass., 1848.

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Nursing Sore Mouth.

Dr. Lee:

Dear Sir,—I have looked in vain in numerous medical works for a satisfactory account of this affection, and have been led to suppose it a comparatively new disease, from the silence of so many standard systematic authors respecting it. Noticing lately in one or two of our periodicals, some allusions to it, with something of a learnedly imposing essay on its pathology, and quite a formidable formula for its treatment, I have been induced to offer the results of my experience in its treatment, in the hope that some valuable lives may be spared, and very much of personal discomfort obviated, by an observance of my suggestions.

And my purpose in this communication is simply to say, without making "an article," that *every case* I have treated has yielded, within forty-eight hours, to the use of iodide of potash in gr. v. doses three times a day. I have sometimes exhibited it in the Guaicum decoction (decoction of the woods) and sometimes in sarsaparilla syrup; probably if given in simple syrup the result would be the same. Some of the cases were exceedingly obstinate and severe. One lady had been obliged to wean four or five children successively, immediately after, or within a few weeks of their birth, and all had tried without success, nearly every remedy known. Without propounding any theory of the pathology of the disease or modus operandi of the medicine, I feel persuaded that the one is as near being a specific for the other, as can well be conceived.

Henry D. Holt, M. D.

New York, April, 1848.

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"The Jerks."

A singular nervous affection has at times appeared in some parts of our Western country, analogous to that described by Hecker, in his work on the "Epidemics of the Middle Ages," under the name of "Tarantula," or "Dancing Mania." As the disease is said to be met with occasionally, no apology will be needed for copying from the Ohio Historical Collections the following graphic description of it.—Ed.

"In 1803, Austinburg, Morgan and Harpersfield experienced a revival of religion, by which about thirty-five from those places united with the church at Austinburg. This revival was attended with the phenomena of "*bodily exercises*," then common in the West. They have been classified by a clerical

writer, as, 1st, the *falling exercise;* 2d, the *jerking exercise;* 3d, the *rolling exercise;* 4th, the *running exercise;* 5th, the *dancing exercise;* 6th, the *barking exercise;* 7th, the *visions and trances.* We make room for an extract from his account of the second of the series, which sufficiently characterizes the remainder.

"It was familiarly called the *jerks*, and the first recorded instance of its occurrence was in East Tennessee, where several hundred of both sexes were seized with this strange and involuntary contortion. The subject was instantaneously seized with spasms or convulsions in every muscle, nerve, and tendon. His head was thrown or jerked from side to side with such rapidity that it was impossible to distinguish his visage; and the most lively fears were awakened lest he should dislocate his neck, or dash out his brains. His body partook of the same impulse, and was hurried on by like jerks, over every obstacle, fallen trunks of trees, or in a church, over pews and benches, apparently to the most imminent danger of being bruised or mangled. It was useless to attempt to hold or restrain him, and the paroxism was permitted gradually to exhaust itself. An additional motive for leaving him to himself was the superstitious notion that all attempt at restraint was resisting the Spirit of God.

"The first form in which these spasmodic contortions made their appearance was that of a simple jerking of the arms from the elbows downwards. The jerk was very quick and sudden, and followed with short intervals. This was the simplest and most common form, but the convulsive motion was not confined to the arms, it extended in many instances to other parts of the body. When the joint of the neck was affected, the head was thrown backward and forward with a celerity frightful to behold, and which was impossible to be imitated by persons who were not under the same stimulus. The bosom heaved, the countenance was disgustingly distorted, and the spectators were alarmed lest the neck should be broken. When the hair was long, it was shaken with such quickness, backward and forward, as to crack and snap like the lash of a whip. Sometimes the muscles of the back were affected, and the patient was thrown down on the ground, when his contortions for some time resembled those of a live fish, cast from its native element on the land."

The most graphic description we have, is from one who was not only an eye witness, but an apologist. He says, "Nothing in nature could better represent this strange and unaccountable operation, than for one to goad another, alternately on every side, with a piece of red hot iron. The exercise commonly began in the head, which would fly backward and forward, and from side to side, with a quick jolt, which the person would naturally labor to suppress, but in vain; and the more any one labored to stay himself and be sober, the more he staggered and the more his twitches increased. He must necessarily go as he was inclined, whether with a violent dash on the ground, and bounce from place to place like a foot ball, or hop round with head, limbs or trunk twitching and jolting in every direction, as if they must inevitably fly asunder. And how such could escape without injury was no small wonder among spectators. By this strange operation the human form was commonly so transformed and disfigured, as to lose every trace of its natural appearance. Sometimes the head would be twitched right and left, to a half round, with such velocity, and in the quick progressive jerk, it would seem as if the person was transmuted into some other species of creatures. Head dresses were of but little account among the female jerkers. Even handkerchiefs bound tight round the head would be flirted off almost with the first twitch, and the hair put in the utmost confusion: this was a very great inconvenience, to redress which the generality were shorn, though directly contrary to their confession of faith. Such as were seized with the jerks, were wrested at once, not only from under their own government, but that of every one else, so that it was dangerous to attempt confining them or touching them in any manner, to whatever danger they were exposed, yet few were hurt, except it were such as rebelled against the operation, through

wilful and deliberate enmity, and refused to comply with the injunctions which it came to enforce.

From the universal testimony of those who have described these spasms, they appear to have been wholly involuntary. This remark is applicable also to all the other bodily exercises. What demonstrates satisfactorily their involuntary nature is, not only that, as above stated, the twitches prevail in spite of resistance, and even more for attempts to suppress them; but that wicked men would be seized with them while sedulously guarding against an attack, and cursing every jerk when made. Travellers on their journey, and laborers at their daily work, were also liable to them."

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The Sydenham Society.—We have received the Fifth Report of the Sydenham Society of England, by which we learn that the Society continues to flourish, and to carry out successfully the objects for which it was established.

The works thus far published, are as follows:

First Year, (1843–4.)—*Hecker's Epidemics of the Middle Ages*, 1 vol.; *Lewis on Phthisis*, 1 do.; *Sydenham's Works*, 1 do.

Second Year, (1844–5.)—*Paulus Æginetæ*, vol. 1; *Observations on Aneurism*, 1 vol.; *Simon's Animal Chemistry*, 1 do.

Third Year, (1845–6.)—*Simon's Animal Chemistry*, 1 vol.—(vol. 2;) *Paulus Æginetæ*, 1 vol.; *Hasse's Pathology*, 1 do.

Fourth Year, (1846–7.)—*Works of W. Hewson*, 1 vol.; *Dupuytren's Lectures*, 1 vol.; *Harvey's Works*, 1 do.

Fifth Year, (1847–8.)—*Paulus Æginetæ*, 1 vol.; *Feuchtersleben Medical Psychology*.

These 14 volumes have cost the publishers in this country about $30, including freight, &c. They are all large octavo volumes, beautifully got up, and are worth far more than their cost, as most of them cannot be obtained except through the Society. A complete edition of the works of Hippocrates, in English, is in the course of publication; also, a volume on Medical Ethics, and on Medical Bibliography. Subscriptions may be sent to the Editor of this journal, or to Mr. John Wiley, Publisher, Broadway, New-York. Terms, $5 per year.

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"Jarvis's Surgical Adjuster."

We have respectfully called the attention of our readers to the merits of the "Surgical Adjuster" of Dr. Jarvis, an instrument now introduced into the French and British hospitals, and extensively employed both in Europe and the United States. From the following report of the Army Medical Board, it will be seen that it is now recommended to be introduced into the army, as it has already, to considerable extent, been, into the naval service.—(Ed. N. Y. Jour.)

(Copy.)

Special Report of the Army Medical Board on Jarvis's Surgical Adjuster.

The Army Medical Board, consisting of Surgeons Finley, Stinnecke and Assistant Surgeon Southgate, to whom was referred the petition of Mr. Kellogg, addressed to the Hon. Sec. of War, praying that Jarvis's Surgical Adjuster might be furnished to the Army of the U. S., have the honor to report, that an examination of the instrument has satisfied them of its adaptation to the treatment of Fractures and Dislocations. The facility with which extension may be applied in a gentle and continuous manner, and instantly intermitted without losing the effect produced, and the ease with which the limb may be manipulated, render it an admirable resource in dislocations which have continued unreduced from unskilfully directed efforts, or the absence of surgical aid, as well as in those which occasionally, under the best management, resist the means applied.

The Board are likewise of the opinion, that it will prove an excellent means of treating fracture of the neck, of the thigh bone; an accident, the treatment of which is too often followed by unsatisfactory results.

Whilst the Board take pleasure in testifying to the value of the invention, and admire it as a happy application of American ingenuity to the relief of human suffering, they are of the opinion, that a very large proportion of fractures and dislocations may be satisfactorily treated by the means and appliances usually resorted to; and at our Military Posts, when well directed surgical aid is immediately rendered on the receipt of the injury, such an instrument will be seldom called for. So high an opinion, however, does the Board entertain of it, as a reliable means of relief in cases which may occasionally present themselves, that they would respectfully suggest to the Surgeon General, whether it may not be expedient to furnish the instrument to some of our large Military Stations, and to each division of our army in the field.

Respectfully submitted by direction of the Board.

(Signed) Robert Southgate, Assistant Surgeon, U. S. A.

Thomas Lawson, Surgeon General, Washington, D. C.

New York, May 25, 1847.

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New Albany, Indiana, April 13, 1848.

Dear Sir,—In a late number of the New-York Journal of Medicine, if I mistake not, you requested the members of our profession to give you brief notices of their observations on the medical effects of indigenous plants. You will therefore excuse my calling your attention to these two.

1. Geraneum Maculatum. Some ten or twelve years since, having under my care a patient suffering severely from mercurial ptyalism, which refused to yield to the ordinary remedies, and remembering that the infusion of this plant was used with great advantage in ophthus ulcers, I supposed it might be of use in the present case. I accordingly used it freely as a lotion, with very speedy and entire relief. I have subsequently used it with great benefit in similar cases.

2. Convolvulus Panduratus. This plant has not received that attention to which, in my opinion, it is entitled, or it has in the hands of others produced effects much less important than has fallen to my lot to observe. It is by some said to be feebly cathartic. When I have used it as a cathartic, it has failed entirely. It is also mentioned as being, by possibility, somewhat diuretic. When given freely in infusion, I have found it to produce more decided diuretic action than any other single article which I have ever used. It is much used in some parts of New Jersey as a domestic remedy for this purpose.

George M. Maclean.

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Medical Department of Transylvania University, Session of 1847–8.—We learn, from a Catalogue of this Institution, recently received, that 167 students attended the last course of lectures, of whom 50 graduated. We are rejoiced to learn of the continued prosperity of this highly respectable school of Medicine, and trust it may continue to send forth its graduates, prepared to encounter successfully every form of disease.

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Pennsylvania Medical Convention.—On the 11th instant this body met at Lancaster; it was well attended, and was an occasion of much interest. A constitution for the organization of a State Medical Society was adopted, officers elected, and delegates appointed to attend the ensuing meeting of the National Medical Association. The best feeling prevailed, and the interest felt in this important movement promises well for the future prospects of the new Society. It adjourned to meet at the same time next year in the city of Reading.—*New Jersey Med. and Surg. Reporter.*

RESOLUTIONS ADOPTED BY THE PHILADELPHIA COLLEGE OF PHYSICIANS, IN TESTIMONY OF THEIR RESPECT FOR THEIR LATE PRESIDENT, DR. HEWSON.

Resolved, That it was with profound regret that the College learned the melancholy fact of the decease of their late revered President, THOMAS T. HEWSON, M. D.

Resolved, That the demise of this gentleman, who was not less distinguished by his attainments in medicine, in literature, and in science generally, than by the amenity of his disposition, the urbanity of his deportment, and the uprightness of his entire life, is an event deeply to be deplored by the members of this institution, with which he was connected during forty-six years, and over whose deliberations he presided for the last twelve years.

Resolved, That one of the Fellows be appointed to prepare a memoir of our late President and colleague, to be read before the College.

Resolved, That a committee be appointed to prepare a letter expressive of the condolence of this College with the family of the deceased.

DR. FRANKLIN BECK was appointed to prepare the memoir of DR. HEWSON; and Drs. WOOD, C. D. MEIGS, and BOND, to carry out the provisions of the last resolution.—*Med. News.*

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From the Albany Evening Journal.

BIRTHS, MARRIAGES, AND DEATHS.

SECRETARY'S OFFICE, April 10, 1848.

Dear Sir,—Having just completed the several tables for a report of Births, Marriages, and Deaths, to be made to the Legislature, in pursuance of the act of April 28, 1847, in which duty Mr. J. Cuyler was associated with me, I thought it might not be uninteresting to the readers of your paper, to give a few general results gleaned from them. I would, however, remark, that as this is the first report made under the law referred to, the reports from the several counties in the State are not as full and complete as could be wished, and unfortunately, owing to an omission in the law, the several cities in the State are in fact excluded from its operation, and no reports have, consequently, been received from them, except a partial one from the city of New-York. The law makes it the duty of "The Clerks of the several School Districts of this State, organized according to law, and where there shall be no Clerk, or he shall be incapable of acting, the Trustees, or one of them, of such District, shall, annually, on or before the 15th day of January in each year, ascertain, from the most accurate means of information in their power, and report in writing to the Town Clerk of the town, or one of the Aldermen of the ward," &c. There being no Clerks or Trustees of School Districts in the several cities, there were, consequently, no officers on whom devolved the duty of collecting the information necessary for this report.

Of the whole number of Marriages, 898 were in the month of January; 841 in February; 820 in March; 612 in April; 701 in May; 730 in June; 942 in July; 770 in August; 1,238 in September; 1,354 in October; 1,151 in November; 1,348 in December.

Of the ages of the persons married, 3,338 were under 20 years; 8,383 between 20 and 25; 4,292 between 25 and 30; 1,300 between 30 and 35; 753 between 35 and 40; 415 between 40 and 45; 260 between 45 and 50; 178 between 50 and 55; 113 between 55 and 60; 74 between 60 and 65; 119 between 60 and 70; 8 over 70; 3,641, ages not given.

The greatest number of marriages took place during the months of September, October, November, and December. 8,383 were married between the ages of 20 and 25.

Total number of births, from January 1, 1847, to January 1, 1848, 35,897; marriages, 11,437; deaths, 17,263.

Of the whole number of births, 2,327 took place in January; 2,501 in February; 3,079 in March; 3,000 in April; 2,974 in May; 2,860 in June; 3,243 in July; 3,370 in August; 3,301 in September; 3,202 in October; 2,910 in November; 3,016 in December; 83, month not given. Of the sex,

18,722 were males; 16,988 females; 187 not given. Of the complexion, 18,155 white males; 16,580 females; 243 black males; 225 females; 695 complexion not given. Of twins, there were 15 pair reported; of illegitimate children, there were 118 reported.

The greatest number of births took place in the month of August, viz.: 3,370; the smallest number in the month of January, 2,327.

Of the whole number of deaths, 1,032 were in the month of January; 1,158 in February; 1,443 in March; 1,327 in April; 1,239 in May; 1,246 in June; 1,447 in July; 1,870 in August; 1,984 in September; 1,623 in October; 1,335 in November; 1,513 in December; 46, month not given.

Of the sex of those dying, 8,613 were males; 8,575 were females; 75, sex not given.

Of the complexion of those dying, 8,157 were white males; 8,121 were white females; 190 were black males; 204 were black females; 591, complexion not given.

Of the condition in life of those dying, 3,352 males were married; 2,917 females were married; 5,400 males were unmarried; 4,318 females were unmarried; 1,276, condition in life not given.

The greatest number of deaths took place during the months of August, September, and October.

The ages of those dying, were:

	Males.	Females.	Total.
Under 1 year	1033	833	1866
1 to 2 years	590	584	1174
2 to 5 "	818	723	1541
5 to 10 "	418	407	825
10 to 15 "	211	236	447
15 to 20 "	276	432	708
20 to 25 "	431	537	968
25 to 30 "	390	445	835
30 to 40 "	535	672	1207
40 to 50 "	494	514	1008
50 to 60 "	502	445	947
60 to 70 "	508	503	1011
70 to 80 "	579	546	1125
80 to 90 "	391	295	686
90 to 100 "	89	71	160
100 years and upwards	15	12	27
Age not given	..	..	755

Of the diseases reported, the following are (amid a multitude of others) the most fatal: Consumption, Dysentery, Inflammation of the Lungs, Dropsy, Croup, and Scarlet Fever, of which consumption is by far the worst.

The average ages of the several occupations of life are as follows: Clergymen, 56 years; Lawyers, 44 do; Physicians, 51 do; Farmers, 57 do. The remainder of the occupations are too numerous, and cannot be stated here, but will be found in full in the report, when published.

M. L. Schermerhorn.

CASE OF ABSCESS NEAR THE AXILLA—TERMINATING WITH PROFUSE HÆMORRHAGE.

I was requested to see a little girl four years old, with pain in her left arm. The upper third of the arm was very tender, upon pressure, but without any external evidence of inflammation. Upon taking hold of the limb and attempting to move it, the child would scream vehemently. The arm was held near to the side, the fore-arm thrown across the epigastrium, and the shoulder depressed, as in fracture of the collar bone. I could discover no evidence of fracture or dislocation. Rest and saturnine lotions were ordered. In three or four days a little redness appeared about an inch and a half below the axilla, under the arm. Poultices were directed—the child became

pale and wan—laid in its cradle, and took but little nourishment. The whole of the upper part of the limb became inflamed, and at the point where the first red spot appeared it began to soften; fluctuation was very apparent, and I was urged by the mother to open it. This I declined doing, without assigning any reason, and, indeed, without having any, except a disinclination to do so. Soon after leaving the house, I began to reflect whether I should not have done so, knowing that it would be followed by relief to my little patient. I hesitated, and was almost ready to turn back, to comply with the reasonable request of the mother. On my visit the next morning, the mother accosted me thus: "Doctor, you must lance this place; indeed you must." It was examined thoroughly, and was evidently fit to open. I had left my case at home, and could not do it. The child suffered intensely, and the mother had been nearly worn out with twelve days of watching and anxiety. The poultices were continued, anodynes were administered, and nourishing food directed. In the afternoon I was sent for in great haste. Not being at home at the time, I did not receive the message for an hour after it was left. On my return I went to the little sufferer; she lay pale, cold, and nearly pulseless, from excessive hæmorrhage. The abscess had broken, and when the discharge occurred, as the mother states, she attempted to raise her arm, and the blood jetted out in a stream, several feet across the room. Pressure was made above the orifice with the finger, the applications all removed, the arm made bare, and covered again with towels wet with cold water. Brandy and chicken broth were administered, but the stomach rejected them. Resort was then had to injections of beef tea, and sinapisms to the extremities. Carb. ammon. in emuls: amygdal: was administered, and retained. The pulse rose a little, and after tone was restored in some measure to the stomach, brandy and water were freely given. I deemed it useless to attempt to secure the artery, as the screams and struggles of the child might have increased the hæmorrhage, and as the orifice was too small to enter with the tenaculum or needle, without a further division. Reliance was placed on the cold affusions, and perfect rest—they were sufficient. By pursuing this plan for several days, re-action was restored, and the patient is now recovering. Much thick and offensive matter was thrown off from the tumor, and continues, to some extent, at this time. The swelling has entirely subsided, and there remains an inability to extend the fore-arm from contraction of the biceps muscle, the radial tendon of which rises distinctly into the bend of the arm, when the extensor muscles attempt to act. The substance of the biceps muscles, and the coats of some one of the important branches of the brachial artery must have been embraced within the sphere of the suppurative action, and suffered a dissolution during its progress, in order to give rise to the results which followed. Had the abscess been penetrated by the lancet, the hæmorrhage would, no doubt, have been attributed to its use; and had the patient died, the reflections of the operator must certainly have been very unsatisfactory.—*N. J. Med. and Surg. Rep.*

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New Liquid Adhesive Plaster.—We have been shown by a young medical student, Mr. John. P. Maynard, of Boston, a liquid adhesive substance, which he has introduced as a substitute for the common adhesive plaster, and over which it seems to us to possess many advantages, and to be applicable to many cases in which the latter is not. It is formed by treating cotton with nitric and sulphuric acids, then washing the substance thoroughly, and afterwards dissolving it in pure sulphuric ether.

In a letter to Dr. John D. Fisher, read before the Boston Society for Medical Improvements, (published in *Boston Med. and Surg. Journ.*, March 29th,) Mr. Maynard states that he has used the adhesive liquid, and seen it used by his preceptor, Dr. Whitney, in more than one hundred cases of surgery, some of them serious, and in all successfully.

"The mode," Mr. Maynard states, "in which it was used in these cases, varied according to the nature, size and situation of the wound. In slight cuts, a moderately thick coating of the solution laid over the incised parts

was, on becoming dry, sufficient to keep the lips of the wound in position till union took place; but in most instances it was employed in conjunction with straps of cotton and sheep-skin, and with raw cotton, forming with them strong, unyielding, adhesive straps, bandages and encasements; and after many experiments, I am convinced that this is the best and most effectual way in which it can be employed as an adhesive agent in surgery. The solution dries rapidly, and in a few seconds, by the evaporation of the ether it contains, it becomes solid and impermeable to water—and a strap moistened with it and glued to any part of the cutaneous surface, adheres to it with a tenacity that is truly surprising.

"In proof of this, I will mention the following facts. A strap of sheep skin, glued to the hand by a thin layer of the solution, nine lines long and one and a half wide, sustained a weight of two pounds. A second strap, attached to the hand by a layer of the substance, nine lines in length and three in width, sustained a weight of three pounds. A third strap, fixed to the hand by a layer of the liquid, twelve lines square, resisted the force of ten pounds without giving way; and a fourth strap of the leather, glued to the hand by a stratum of the solution, measuring one and three-fourths of an inch in length and one in width, was not separated from its attachment by the gravity of twenty pounds! These statements may appear incredible; but they are founded on exact and carefully-performed experiments, and are true. No other known gum possesses such adhesive power as these experiments show this cotton gum to be endowed with. No adhesive plaster hitherto used in surgery is to be compared to it in this respect. It therefore can be made use of in cases in which the common adhesive plaster would be useless.

"The wonderful adhesive properties which my experiments proved it to possess, suggested the thought that it might answer the purpose of sutures in surgery. And an opportunity soon occurred to enable me to decide the fact that it would. I allude to the operation performed by Dr. Whitney, for the removal of a wen from the head. Fearing that an erysipelatous inflammation might arise in the scalp, in case he united the divided parts by sutures, Dr. W. shaved the hair from the raised scalp, and by means of the cotton solution he glued some short and narrow straps of sheep-skin on each flap, a short distance from their edge. These straps were then drawn towards each other until the edges of the wound were brought into close and exact union, and the free ends of the straps were fastened together by sutures. In this case the needle and thread were passed through inanimate leather instead of living flesh, causing no pain to the patient and no interruption of the process of healing. The wound healed favorably, and without the usual accidents necessarily occasioned by the presence of sutures in, and the operations for their removal from the parts. The happy result of this case convinced me that a means was now discovered which would enable the surgeon to do away with sutures, pins and needles, in most of the cases in which these are at present considered indispensable.

"Although unauthorized to do so, I must take the liberty, in this place, to mention the interesting fact that Dr. Comstock, of Wrentham, has recently enployed this liquid as a dressing in a case of extensive laceration of the perineum, with a success that he thinks never attended any other mode of management. The dressings remained firmly attached and solid during the process of healing, notwithstanding they were for a time almost constantly covered by urine and mucus, and subject to being displaced by the movement of the patient."—*American Jour. Med. Sciences.*

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REPORT OF THE PRINCIPAL FACTS CONNECTED WITH A FATAL CASE OF CHLOROFORM INHALATION, WHICH OCCURRED IN CINCINNATI.—The subject of the following report, Mrs. Martha G. Simmons, was, at the time of her decease, thirty-five years and ten months old. Her husband states that she generally enjoyed excellent health; sometimes she was "nervous," and suffered occasionally with neuralgic pains about the face, and pain in the ear, apparently arising from decayed teeth. She also suffered at times from

"sick headache." She was the mother of six children, five of whom are still living; her last accouchement occurred eight weeks previous to her death. Nothing unusual occurred, either at the time of parturition or subsequently; her health remained good, and the ordinary quantity of milk was secreted.

On the 23d of February, she dined at a quarter past 12 o'clock, and after dinner walked to a dentist's, a distance of about three-fourths of a mile, for the purpose of having some roots of teeth extracted. She arrived at the dentist's 15 minutes before 3 o'clock, appeared slightly flushed from the exercise of walking, but exhibited no alarm on account of inhaling the chloroform.

At 3 o'clock, 15 minutes after her arrival, Mrs. S. commenced inhaling chloroform. Mrs. Pearson, and Mrs. Cross, two female friends, were present, and report the following as the events which occurred: The respiratory movements appeared to be free—chest heaving. While inhaling, *the face became pale*. At the expiration of about *one minute*, the instruments were applied, and four roots of teeth extracted. The patient groaned, and manifested what they regarded as evidences of pain, while the teeth were being extracted, although she did not speak, or exhibit any other sign of consciousness. As the last root came out—which was about two minutes from the beginning of the inhalation—patient's head turned to one side, arms became slightly rigid, body drawn somewhat backwards, with a tendency to slide from the operating chair. At this instant, Mrs. Pearson states that she placed her finger upon the patient's pulse, observed that it was feeble, and immediately ceased to beat; respiration also ceased *about* the same time. The face, which was previously pale, now became livid, as also did the finger nails; the lower jaw dropped, and the tongue projected a little at one corner of the mouth, and the arms were perfectly relaxed. The females regarded her as being then quite dead. Efforts were made to resuscitate the patient—ammonia was applied to the nostrils, cold water dashed in the face, mustard, brandy, &c., applied. The patient was now removed from the operating chair, and laid on a sofa; but she did not breathe, nor exhibit any sign of life, after being placed in the recumbent position.

Messrs. Meredith and Sexton, the dentists who operated in the above case, make the following statement:—The patient took the chloroform vapor from Morton's inhaler; it contained a sponge (perhaps one-third filling the glass globe of 4¼ inches diameter,) saturated with the liquid; to this 25 drops more were added when the patient began inhaling. Breathing at first slow; inhaled 12 or 15 times, occupying from a minute to 75 seconds. One of the dentists thinks she remained about *ten* minutes in the operating chair, and that life was not extinct till the end of that time; the other estimates the time at *five* minutes. One says he does not know whether she breathed after being laid on the sofa, or not; the other thinks she did not.

After the patient was laid on the sofa, medical aid was sought, and Dr. A. H. Baker was the first physician who arrived; this was probably thirty minutes after respiration had ceased. He immediately pronounced her dead, but proceeded to employ vigorous measures for her resuscitation. The principal means employed consisted in artificial respiration, electro-magnetism, and external stimulants. Prof. Locke applied electro-magnetism, which caused active muscular contraction, but no evident effect on the heart. About an hour after the accident, Profs. Mussey and Lawson arrived, and aided in the further employment of the means above specified. Not the slightest sign of life was manifested after the arrival of Dr. Baker; the heart did not respond to the electricity, and the only change produced was some slight removal of the lividity of the countenance by the artificial respiration.

The *post-mortem examination* was made twenty-six hours after death. Present—Drs. Mussey, Lawson, and Mulford.

Examination by Dr. Lawson. Record by Dr. Mussey.

External Appearances.—Lips livid, but face pale; bloody froth issuing

from the mouth. Anterior surface of body and limbs free from discoloration, but posteriorly the skin presented a deep livid hue. Cornea dull and flaccid, and a dull-red horizontal belt extended across each eye, corresponding to the part which was unprotected by the lids; this belt was one-tenth of an inch in diameter, and made its appearance a few hours after death. Limbs quite rigid. Abdomen distended with gas. Patient rather muscular; weight probably from 140 to 150 pounds; hair dark; eyes dark brown; temperament, sanguineo-bilious.

Brain.—Integuments contained but little blood. On removing the upper part of the skull, a larger quantity of blood than usual flowed from the vessels of the dura mater. Superficial vessels of the brain moderately distended; two or three ounces of fluid blood, intermixed with bubbles of air, flowed from the sinuses of the dura mater. General aspect, color, and consistence of the brain, normal.

Lungs.—Considerably but not intensely congested; crepitated freely at all points; no extravasation. Lining membrane of bronchia slightly congested, apparently the result of recent catarrh; deeply stained by the blood. Pleura at all points highly injected; six drachms bloody serum in the right, and two ounces in the left chest.

Heart and large Blood-Vessels.—Pericardium contained six drachms of bloody serum. Heart flaccid, *and all its cavities entirely empty;* inner surface of both ventricles and auricles deeply stained. Aorta and pulmonary artery empty; no blood in the cava within the chest, and a very small quantity in the part which lies within the abdomen; indeed, so small was the amount, that it could not be appreciated until the vessel was opened. Lining membrane of all the blood-vessels deeply stained.

Abdomen.—One ounce and a half of bloody serum in the right hypochondrium. Stomach and intestines distended with gas. Partially digested aliment, amounting to about three gills, was found in the stomach. Liver paler than usual, arising from the absence of blood; kidney considerably engorged. No marks of previous disease in any of the abdominal organs. Uterus and bladder normal; the former exhibited the usual condition of the organ two months after delivery.

Blood.—Fluid as water, in every part of the body; not a coagulum was seen in any vessel. Examined with the microscope, the globules appeared altered somewhat in form; some were irregular in shape, and they seemed generally distended and more globular than is normal; they were also somewhat fragmentary, a part apparently having been ruptured; their number seemed somewhat diminished. The color, in every part of the system, was that of dark venous blood.

Sympathetic Nerve.—The sympathetic nerve, together with its larger ganglia, including the semilunar ganglion, presented a natural color.

The Chloroform used.—The specific gravity of the chloroform employed was found to be 1.3. It contained some alcohol, but upon the whole is regarded as a fair article. It was the same which the dentists had previously used in numerous cases, without any unpleasant results.—*The Western Lancet and Hospital Reporter*, March, 1848.

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MUNIFICENT CONTRIBUTION TO MEDICAL EDUCATION.

Some twelve or fourteen years ago, a medical school was commenced under the name of Willoughby University, in the humble village of Chagrin, now Willoughby, eighteen miles from Cleveland, Ohio, on the banks of Lake Erie. A few years since, most of the Faculty left it for the more eligible city just named. Their places were supplied by others, who, however, soon felt the disadvantages of the position; and, with the sanction of their trustees and the Legislature of Ohio, they transferred the institution to Columbus, the seat of government. There it attracted the regard of LYNE STARLING, Esq., an old and respected citizen, formerly of Kentucky, who during the past winter made to it the liberal donation of THIRTY THOUSAND DOLLARS—two thirds to be expended in the erection of a college edifice, and one third in

founding a hospital for clinical instruction. It gives us great pleasure to record this act of liberality, and we trust that all our readers will honor the name of Starling, as those to whom the money was given have done; for by an alteration in the charter, the school is henceforth to be entitled THE STARLING MEDICAL COLLEGE.

With the aid of this ample endowment, we trust the Faculty will venture to advance the price of their tickets, which is now only eight dollars each. We would not insist, that in a region where the charges of physicians are lower than in many other parts of the country, they should be required, while studying, to pay the highest price for their tickets; but that just named is too low, and ought to be advanced to twelve dollars at least. Such an advance is due to the benefactor of the College.

The annual announcement, from which we have obtained the foregoing particulars, presents a catalogue of one hundred and thirty-eight pupils, of which twenty-five, or about eighteen per cent., are marked as practitioners. This number struck us as large, and taking up the Catalogue of the University of Louisville, we found that the whole number thus marked was, in four hundred and six, but sixteen, or a fraction less than four per cent. If a great number of these physicians of Ohio have gone into practice before graduating, it is cheering to find that so many have not lost sight of the duty of perfecting their university education. We hear much from the people about the great number annually graduated by our school; but they ought rather to dread the still greater number who engage in practical duties without graduating—many, indeed, notwithstanding the great number of schools, without attending a single course of lectures in any.—*Western Journal.*

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CASES OF HÆMORRHAGE FROM THE UMBILICUS.

BY ELIAS J. MARSH, M. D.

In the course of my practice, I have met with two fatal cases, and several very slight ones, of a disease not usually noticed in the books of practice which have fallen under my notice. The disease is hæmorrhage from the umbilicus, after the separation of the cord. In the fatal cases of which I speak, compression, astringents, and escharotics were employed, but to no good purpose; in one case, the twisted suture was used by a physician, but with the same result. Local applications, mild and severe, appeared to have no control over the hæmorrhage. In these cases, the skin and conjunctiva assumed a deep icteric hue; it was not the usual *icturus mentarum*, which probably depends upon some change in the condition of the blood in the cutaneous capillaries, but a true jaundice.

I attribute the disease to some obstruction in the liver, which prevents the normal circulation of the blood throughout that viscus, and forces that fluid in a refluent course through the unobliterated umbilical vessels. Acting upon these pathological views, in one or two slight cases of similar hæmorrhage, I have adopted the practice of free purging, with apparent good effect; whether it would answer in the severer forms of the disease, I cannot say, but it may be worth the trial, as local applications are entirely useless. As the disease appears to be of rare occurrence, I have thought that this brief notice may not be without interest to some of your readers.—*New Jersey Med. and Surg. Reporter.*

Paterson, March, 1848.

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MEDICAL CLASSES, SESSION of 1847–8.—The number of Matriculants in the Medical Department of the University of Pennsylvania, as shown by the catalogue, was 508, of which 47 were graduates of this, and 18 of other institutions.

The catalogue of the Jefferson Medical College contains the names of 480 as attending the lectures, of whom 58 were graduates.

The class of the Medical Department of the University of Louisville, according to the catalogue, numbered 406, of whom 13 were graduates.

The number of the class of Starling Medical College, (Columbus,) as given in the catalogue, was 138, of which 4 were graduates.

Remuneration of Medical Men in Canada, for attendance on Fever Cases.—The British government have ordered that the scale of remuneration to physicians for attendance on the fever hospitals in Canada should be lowered to twenty-five shillings a day,—that every physician should attend two hundred patients, and that only two nurses should be allowed to every hundred patients. We have before noticed the low estimate placed by the British government upon medical services; and if the profession of Canada submit to this insulting treatment, in a little while their remuneration will be reduced to the sum allowed by the government to physicians in Ireland, "five shillings a day!"

The *London Times* contains the following just remarks on the present system of remunerating poor-law medical officers:

"There can, however, be no doubt of the entire hopelessness of the attempt to provide for the medical relief of the poor by paying for it at the lowest rate at which it is tendered. Nothing can be supplied honestly and permanently for less than it is worth, and with the skill of the professional man, as with the commodities of the tradesman, underselling must either be carried on by fraud, or be brought to an end by ruin. Parochial surgeons must be properly paid before parochial patients can be properly attended; for in nineteen cases out of twenty a desire to prove by experiment the very cheapest rate at which a duty may be performed, ends in ascertaining the highest cost at which it may be neglected. It is folly to expect liberal and generous conduct in return for mean and shabby treatment."

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Medical Convention of the State of South Carolina.—In compliance with the call of the Medical Society of the State of South Carolina, a Convention of the Physicians of the State convened in Charleston, on the 14th of February last.

The following officers were elected:

President.—Dr. James Moultrie, of Charleston.

Vice Presidents.—Dr. C. Ready, of Edgefield, Dr. Isaac Branch, of Abbeville.

Secretaries.—Dr. D. J. C. Cain, of Charleston, Dr. R. Johnson, of Camden.

The Convention was then organized, and proceeded to business.

On motion of Dr. T. Y. Simons, it was

Resolved, That a Committee of five be appointed, to report on the recommendation of the National Medical Convention, to the Medical Profession, to use their influence to have established in their respective States a Registration of Births, Marriages, and Deaths.

Committee.—Drs. Simons, Dendy, Youngblood, Fair, and Keith.

On motion of Dr. Jervey, it was

Resolved, That it is both desirable and necessary that all young men who may hereafter apply to be received as Students of Medicine, should have obtained a proper and suitable preparatory education, and that a Committee of five be appointed to report on the standard of requirements proper to be exacted from such applicants.

Committee—Drs. Jervey, Mabry, Shuler, Easterling, and Sims.

On motion of Dr. Wragg, it was

Resolved, That a Committee of five be appointed for the purpose of reporting on the best means of discouraging druggists who are in the habit of vending patent medicines and nostrums.

Committee—Drs. Wragg, Gilbert, McKain, Canther, and McKewn.

Dr. Wragg laid before the Convention a circular from the College of Pharmacy of New-York, which was read by the Secretary, and referred to the Committee on Druggists.

Dr. Elias Horlbeck, of Charleston, then offered the following Preamble and Resolution:

Whereas the members of the Medical Profession of the State of South Carolina are assembled on this occasion for the general purpose of advancing

the character and usefulness of this calling, as well as for other objects more particularly set forth in the circular of the Medical Society of this city, and whereas it has been ascertained by experience that the united and concerted action of individuals engaged in similar pursuits facilitates the accomplishment of their ends—therefore be it

Resolved, That in order to the more successful attainment of the objects for which it has assembled, this Convention do proceed to establish a State Medical Association, and that a Committee of five members be nominated to report a Constitution and By-laws for its permanent organization.

Dr. Wragg moved that the Committee retire and report as soon as they are ready.

On motion of Dr. Elfe, the Convention took a recess for half an hour.

The Convention re-assembled at half past one o'clock.

The President inquired whether any of the Committees were ready to report.

Whereupon Dr. Jervey submitted a report from the Committee on Preliminary Education, with the following resolutions:

1st. *Resolved*, That this Convention earnestly recommends to the members of the Medical profession throughout the State of South Carolina, to satisfy themselves, either by personal inquiry or written certificate from competent persons, that all young men who may hereafter apply for admission into their offices as students, shall be of good moral character, and shall have acquired a *good English education*, a knowledge of natural philosophy and the elementary mathematical sciences, and such an acquaintance, at least, with the Latin and Greek languages as will enable them to appreciate the technical language of medicine, and read and write prescriptions.

2d. *Resolved*, That this Convention also recommends to the members of the Medical profession of the State of South Carolina, when they shall have satisfied themselves that a young man possesses the qualifications specified in the preceding resolution, to give him a written certificate, stating that fact, and recording also the date of his admission as a Medical Student, to be carried with him as a warrant for his reception into the Medical College in which he may intend to pursue his studies.

3d. *Resolved*, That the Medical College of the State of South Carolina be, and it is respectfully recommended and requested, to give its aid and assistance in establishing the above requisitions, by demanding such a certificate from every Student of medicine, who may hereafter apply for matriculation; and when publishing its annual list of graduates, to accompany the name of the graduate with the name and residence of his preceptor, the name of the latter being clearly and distinctly presented as certifying to the necessary and required preliminary education.

Dr. De Saussure moved that the report be accepted, and 100 copies be printed for distribution and consideration to-morrow.

Dr. Horlbeck submitted a report from the Committee on the By-Laws of the South Carolina Medical Association.

Dr. Gadsden moved that the report be accepted, and 200 copies be printed for consideration to-morrow. Adopted.

Dr. Wragg submitted a report from the Committee on Druggists, with the following resolutions:

1st. *Resolved*, That in our transactions with Apothecaries, we will deal exclusively with those who abstain from recommending and vending quack or patented medicines, whenever we have the option.

2d. *Resolved*, That in writing prescriptions for our patients, or in directing them where to obtain any articles connected with the treatment of their diseases, of which they may stand in need, we will always recommend them to those Apothecaries alluded to in the first resolution; and further, that we will use our influence with our patients and all our unprofessional friends, in inducing them to deal at such drug stores.

3d. *Resolved*, That each member of the Convention pledges himself to report to the South Carolina Medical Association, or to one of the branches contemplated to be formed by this Convention, at a regular meeting, all

cases coming under his own observation, or reported to him on credible authority, of mistakes committed, or injury inflicted, through the ignorance or carelessness of Apothecaries or their clerks; and that these facts be made use of by the Society in any way it may think best calculated to act on the community towards the end we have in view.

4th. *Resolved*, That the following letter, or one to the same effect, be addressed by the State Medical Society to every keeper of an Apothecary's store, or other establishment, for the sale of any kind of medicine, in the City of Charleston, and as far as it can be effected, to every such person in the State, viz:

"Sir:—The South Carolina Medical Association is deeply impressed with the importance of the move made by the National Medical Convention held in Philadelphia, in May, 1847, for the purpose of discouraging the pernicious traffic in patented medicines. The Society does not think it necessary to state the reasons which induce them to approve of the recommendations there made, believing that they are so well understood as not to require either enumeration or comment. It will be enough for the Society, in accomplishment of its design, to request your co-operation; and to state, at the same time, that its members, individually and collectively, are resolved to do all they can, legally, to effect the object."

And that the latter be signed by the President, and one or both of the Secretaries of the Society.

5th. *Resolved*, That the Convention embodies, in its petition to the Legislature upon matters now before it, or about to be brought forward, a request to enact a law prohibiting the sale of any medicine, upon the label of which the ingredients it contains are not fully and accurately stated.

Dr. Ramsey moved that the report be accepted, and 100 copies printed for consideration to-morrow. Adopted.

On motion of Dr. Simons, the Convention adjourned until 11 o'clock to-morrow morning.

Tuesday, Feb. 15, 1848.—The Convention assembled at 11 o'clock, pursuant to adjournment.

The roll was called, and several gentlemen who had arrived since the sitting of yesterday, appeared, registered their names, and took their seats in the Convention.

The minutes of the meeting of yesterday were read and confirmed.

Dr. T. Y. Simons read a report from the Committee on the Registration of Births, Marriages, and Deaths, which, on motion of Dr. F. M. Roberts, was ordered to be printed.

1st. *Resolved*, That the Report on the Registration of Births, Marriages, and Deaths, with an accompanying memorial, be presented to the Legislature, at its next session.

2d. *Resolved*, That the members of this Convention, and the members of the Medical profession throughout the State, be requested to explain to the Representatives and Senators in their districts, the importance of the measure, and use their best exertions to obtain a passage of the bill.

On motion of Dr. Mitchell, the report and resolutions were unanimously adopted, and ordered to be printed with the proceedings of the Convention.

Dr. Wragg, from the Committee on Druggists, to whom had been referred the circular of the New-York College of Pharmacy, made a report recommending the adoption of a memorial to Congress, in relation to the frauds practised by many Druggists in the importation and manufacture of drugs.

Dr. McKain moved that the report be adopted, and that the Memorial be signed by the officers of the Convention, and a copy be sent to the Senate and House of Representatives, which resolution was adopted.

On motion of Dr. Lee, amended by Dr. Wylie, it was

Resolved, That a committee of one from each district represented in the Convention be appointed to ascertain the number of practitioners in this State, diplomated, licensed, and authorized, for the American Medical Association.

The report of the Committee on preliminary education, with the accompanying resolutions, was taken up and adopted.

Wednesday, Feb. 16th.—The following resolution, offered by Dr. Mackey, was unanimously adopted:

Resolved, That notwithstanding the very low standard of preliminary education adopted by the American Medical Association, and concurred in temporarily by this Convention, for prudential reasons, yet it is the opinion of this Convention that the respectability of the profession, and the usefulness and chances for eminence of the practitioner, would be greatly augmented by a preparatory course of liberal studies.

Dr. F. P. Porcher moved the following resolution, which was unanimously adopted:

Resolved, That a Committee of one from each district represented in this Convention be appointed by the President, whose duty it shall be to investigate the *Indigenous Medical Botany* of this State, paying particular attention to such plants as are now, or may be hereafter, during the term of their service, found to possess valuable medicinal qualities, giving not only the botanical or medical description of those not accurately described in the standard works of our country, but also the localities where they may be found, and report the same in writing to the next annual meeting of the South Carolina Medical Association.

Dr. Dendy offered the following preamble and resolutions, which were adopted:

However much other causes may tend to embarrass medical reform, we nevertheless regard the failure of Medical Colleges to require a strict conformity, even to their present low standard, as an impediment worthy of the most serious consideration. And while it affords us much pleasure to know that the Medical College of South Carolina stands among the first, in her preparatory requirements, and in the enforcement of them, we feel that more may yet be done to elevate her still higher.

It is apparent to all of us, that the term of lecturing in all our Medical Colleges is entirely too short to enable the different professors to do that justice to their subjects which their importance demands, and that it is far too short to enable students profitably to receive the amount of instruction which should be contained in a course of lectures. The door of entrance also into Medical Colleges is not sufficiently guarded.

The neglect on the part of first course medical students to attend regularly the lectures, is an evil of great magnitude. It is not only an obstacle to the attainment of medical knowledge, but it tends to consequences far worse—the destruction of morals.

The examinations for the degree of M. D. are not generally conducted with sufficient care to secure the ends contemplated by their institution. And as this Convention feels the greatest interest in the prosperity and usefulness of the Medical College of South Carolina, and as we look to her as the guardian of the Medical profession of this State, and as the institution which is to prepare those to whom are to be entrusted the progress and perpetuity of all reforms in the Medical profession, therefore

Resolved, That this Convention does earnestly recommend, that the Medical College of South Carolina lengthen the term of lecturing, from four to six months; that she may better guard the door of entrance, and secure the attendance of first course students by examinations; also that she should conduct her examinations for the degree of M. D. more rigidly.

Resolved, That should she adopt the above recommendations, we will use our influence in her support.

The report and resolutions of the Committee on Druggists were then taken up and adopted.

The Convention adjourned *sine die*, by resolving itself into the *South Carolina Medical Association.*

The officers of the Convention were requested to act as officers of the Association, until others were appointed. The Association then went into an

election for Counsellors, after which it adjourned, to meet on the third Wednesday of February, 1849.

After the adjournment of the Association, the Counsellors went into an election for officers of the Association, when the following gentlemen were duly elected:

Dr. James Moultrie, *President.*
Dr. Isaac Branch, Dr. J. C. Ready, *Vice Presidents.*
Dr. D. J. C. Cain, *Recording Secretary.*
Dr. R. B. Johnson, *Corresponding Secretary.*
Dr. F. M. Robertson, *Treasurer.*
Dr. P. C. Gaillard, *Orator for* 1849.

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The Thirteenth Medical District Society of Indiana, includes the counties of Henry, Madison, Grant, Hamilton, Hancock, Tipton, and Howard. This Society has been established and well supported for twelve years; it has regularly met and kept up its organization during that time. The following officers were, on the 3d of May, 1847, unanimously elected for the ensuing year, viz.:

Joel Reed, M. D., *President.*
Dr. A. J. Clawson, *Secretary.*
Dr. J. C. Beck, *Treasurer.*
Censors.—T. B. Woodward, M. D., T. N. Jones, M. D., and G. W. Ridell, M. D.

The next Annual Meeting of the Society is the first day of next May.

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Delegates from the "New York Academy of Medicine" to the American Medical Association.—The "New York Academy of Medicine," which comprises two hundred and sixty-one active resident fellows, has appointed the following gentlemen to represent it in the "American Medical Association, viz.:—Doctors, J. R. Manley, Isaac Wood, J. R. Wood, R. Watts, Jr., A. H. Stevens, F. Campbell Stewart, H. D. Bulkley, F. U. Johnston, A. C. Post, W. Parker, C. R. Gilman, Thomas Cock, J. C. Cheesman, S. P. White, J. A. Swett, J. H. Griscom, W. H. Van Buren, G. Carter, J. W. Francis, J. O. Pond, J. K. Rodgers, Chas. D. Smith, Thos. F. Cock, J. G. Adams, J. R. Van Kleek, and Benjamin Ogden.

The Academy has likewise adopted the Code of Ethics of the late National Medical Convention.

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Extension of the Medical Session in the Medical Department of the University of Louisville.—The annual advertisement, just issued by this school, announces that the next session will commence on the 16th day of October, which, being Monday, and occurring just three weeks before the first Monday of November, (the sixth day,) will make the next session twenty weeks instead of seventeen. We understand that it is the intention of the Faculty to commence the session following the next on the first Monday of October, thus adding a month to the old term. We record this attempt with heartfelt pleasure, for our short sessions, in the United States, may justly be considered as adverse to adequate preparation for graduation. —*West. Jour. of Med. and Surg.*, March, 1848.

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DATURA STRAMONIUM AN EMMENAGOGUE.

BY B. F. JONES, M. D., OF ST. LOUIS COUNTY, MISSOURI.

Distinguished practitioners of medicine doubt whether there be any medicine known, capable of so influencing the uterus, as to compel it, even when healthy in other respects, to secrete the catamenia. Hippocrates made no pretensions to a knowledge of any such medicine, nor did Sydenham; and Boerhaave's catalogue of emmenagogues comprehends only such medicines as are conspicuous for determining to the pelvic viscera—stating that "we have no uterine remedies but sudorific determined to the uterus." Dr. Eberle tells us, "It is very doubtful whether any of the articles which have hitherto

been employed for this purpose possess any direct influence over the uterine secretions;" and such, I presume, is the experience of physicians generally.

In reasoning upon this subject, it occurred to me, that inasmuch as there was a medicine (*the secale cornutum*) capable of exerting a specific impression upon the uterus, and forcing it to the energetic performance of *one* function—the expulsion of the ovum—there was nothing unphilosophical in the hope that a remedy might exist capable of urging upon it the elaboration of *another*—the secretion of the catamenia.

If Nature, in the exuberance of her munificence, had vouchsafed to us a medicine endowed with capability to abridge the parturient effort, it was scarcely expecting too much from her beneficence to hope, that among her rich *arcana* was another capacitated to place the uterus in a condition for the exercise of its function of reproduction. In the absence of the one, the other would not unfrequently be useless—and to that extent mar that beautiful harmony, and adaptation of means to ends, of which Nature is so observant in all her operations.

Persuaded of the philosophy of this view, as far back as 1839, when I practised my profession in the city of Chihuahua, in Mexico, I was led to experiment with a great number of powerful plants, of recognised capability strongly to impress the organism, with the hope of discovering among them a special relevancy of action for the uterus, during the suspension of its periodical function. The datura stramonium, from the energy it displays in affecting the nervous system, without exciting the circulation, together with its simultaneous relaxing effect upon the bowels, with the increase of urinary and dermoid secretion, presented strong claims to my attention in this experimental inquiry.

The result of my investigation is, the belief that stramonium does possess the power of imposing upon the uterus a renovated secretory effort, to the same extent that mercury does upon the liver, or the salivary glands, *ceteris paribus*, and is therefore eminently entitled to the cognomen of an emmenagogue; a distinction that cannot of right be conferred upon any other known article in the materia medica. So that properly there belongs to each of the important classes of abortives and emmenagogues, but one article—secale cornutum, and datura stramonium.—*Western Journal.*

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Application of the Nitrate of Silver to the Larynx in Croup.

(*Read before the Boston Medical Society for Improvement, by* Charles E. Ware, M. D.)—The very great mortality which attends membranous croup, makes every case of recovery interesting, and the treatment, when it has been consistent and efficient, instructive. Although we frequently hear well-informed practitioners talk flippantly of their success in the management of croup, yet every one who is in the habit of discriminating between the two forms of the disease, knows with what a sinking heart and faltering hand he undertakes the treatment of the one, and with what comparative confidence he deals with the other.

Within the last two or three years, the system of steaming by the inhalation of hot vapors of herbs of various kinds, has been tried pretty extensively in this neighborhood, and I should think from the number of successful cases reported before this Society, with encouraging success. One great and most serious objection, however, to this treatment, supposing its value established, is in many cases the impossibility, and in all the extreme difficulty, of applying the remedy effectually, with any apparatus which has yet been devised, and ingenuity in and out of the profession has not been idle in contriving. This obstacle in the way of the treatment which would seem to present the most promise, together with some apparent success in the applications of the nitrate of silver to acute inflammation of the tonsils both in children and adults, and the facility with which the nitrate of silver may be applied to the larynx with but trifling irritation in the adult, led me lately to try the application of it to the larynx of a child five years old, laboring under unequivocal membranous croup.

I was called to this patient, a boy five years old, Saturday, November 20th. The mother said that he began to breathe hard just a week previous, but as he had been subject to attacks of spasmodic croup, in several of which I had attended him, and usually found ready relief, she felt no great anxiety, especially as there was less constitutional affection than he had had in former attacks. His tonsils, also, had been for a year or more somewhat enlarged, and often gave a huskiness to his respiration and voice. On Tuesday he began to cough, and evinced other signs of a cold. These symptoms continued, he playing about, and having appetite, without anything very characteristic, till Friday afternoon, when the cough began to have a ringing tone, and the respiration to be very labored. I was not called to him till the next afternoon. Then there was the characteristic breathing of croup well marked. It had become sufficiently distressing to occasion great restlessness and jactitation, but was not accompanied by much febrile excitement, nor, as yet, prostration. The general expression of the child was good. On examining the fauces, they appeared red, and the tonsils presented distinct patches of lymph. On the backs there was an almost entire absence of respiratory sound, and no râles whatever. The breathing and cough were both dry, with very little râle in the trachea.

He was ordered strong mercurial ointment and a fomentation to neck, and pills of Dover's powder and blue pill once in four hours, and a syrup with opium and ipecac. at intervals between. Under the influence of the opium he got more sleep than during the previous twenty-four hours, but in the morning was no better, nor essentially different.

I now commenced the application of the nitrate of silver to the larynx, using a solution of the strength of a drachm to the ounce, and applying it with one of Dr. Green's whalebone staffs. I applied it twice in the course of the first day. The child the first time resisted violently, and I was obliged to use much force. But after having been persuaded once to submit quietly, the operation occasioned so little irritation that he never afterwards made the least objection to it, but allowed me to perform it as effectually as I could have done upon a grown person. The first applications were followed by so much excitement that it was difficult to see what was the immediate effect. But afterwards, when he was more tranquil during the operation, it was obvious that it produced an increased dryness of the cough and respiration, without immediate relief or aggravation of the labor in breathing. In the course of the day he raised twice considerable pieces of false membrane, very well marked, and stained with blood, together with a great deal of very thick, tenacious mucus, which was also occasionally stained with blood. After the discharge of the false membrane the breathing became much easier, and was never again as labored as it had been before.

The next day, Monday, respiration, although improved, was still very laborious. There was yet great deficiency of respiratory sound in the back, and absence of râles. After the application of the caustic, which was applied twice this day, the fauces appeared red, but there was no lymph visible. From this time the amendment, although slight, from day to day was constant till Friday, the 26th. No lymph was seen upon the tonsils. The caustic was applied once a day. Friday night, the breathing was more labored than the night before, and Saturday morning I again saw lymph upon the tonsils. Through Saturday and Sunday, however, he continued to improve, and Sunday evening uttered the first loud word which he had been able to speak since I had seen him. The caustic was now omitted, as well as all his medicines. His appetite, which had never entirely disappeared, became more urgent, and he was allowed to eat freely. Indeed, his diet had been liberal throughout. The respiratory sound gradually returned to the backs, but continued as it had done throughout, free from râle. The voice continues to improve, but still retains a huskiness. The caustic was applied twice the two first days; afterwards but once a day, the sponge never being introduced more than once at the same visit.

This is a case of croup in which the disease was obviously limited to the trachea, if not to the larynx, and in this respect was as favorable for the

application of the peculiar treatment as it could be. In the majority of cases, from my own observation, the disease extends more or less into the lungs. Of five *post-mortems* which I have made, in one case disease was limited to the larynx and upper part of the trachea. In the other four it extended far into the lungs, in one producing chronic pneumonia, of which the child died after recovering from the croup. In such cases one would not expect much from the treatment, since the application could only be made over a very small extent of the diseased surface. It is as yet, however, not very well understood precisely where the obstruction takes place, which occasions the death in croup. It is probable that it varies greatly in different cases. I have seen once or twice, in *post-mortem* examinations, the trachea and larynx so thinly coated, and to such a limited extent, that it seemed impossible that it should not have been sufficiently free for respiration, while the large bronchi of the lungs on both sides were almost entirely obstructed by thick tenacious mucus. In such cases the source of death is probably obstruction of the bronchi. But from the great relief which is almost always given by the rejection of pieces of false membrane, and from the frequency of its occurrence (indeed, since attention has been drawn to the point, I think there are few cases occur in which it is not observed), it is probable that the cause of death is generally in the trachea, and most frequently at the upper part, or in the larynx. The latter fact would be indicated by the almost universal, if not universal, temporary relief which the operation of tracheotomy gives in these cases. If this part, then, could be kept free, the chances would be greatly increased of the child's being able to struggle against the disease.

The cases in which I have applied the nitrate, or seen it applied, to inflammatory affections of patients in which there was a tendency to this deposit upon the mucous membrane, have been as yet few, but it has certainly appeared that the application had much efficiency in keeping the membrane clear.

This is one case of recovery. My own observation would furnish nothing more in favor of any other treatment. Of fourteen cases of croup which I have either attended myself or seen during their course, four have recovered. In one of the cases of recovery, there was no treatment. The child was so violent that nothing could be done. The disease was left literally to its natural course. In the second case the treatment was essentially opiate. In the third case, the steaming was applied more efficiently than I have ever seen it in any other case. The fourth case was the present. An interesting point in this case was the speedy recovery of the voice. The child spoke loud at the end of the week after the treatment commenced. In all other cases of recovery which I have known, the absence of the voice has continued for many weeks; five or six has, I think, been the shortest limit.

The case is valuable, also, as showing that a sponge saturated with so strong a solution of nitrate of silver, can be introduced into the larynx of a child not only with safety, but after the first application, with so little inconvenience.—*Boston Med. and Surg. Journal.*

Since reading the above case, an article by Dr. Blakeman, of New York, in the American Quarterly retrospect, has been pointed out to me, according to which he has employed this same treatment with success.

Boston, Dec. 16, 1847.

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Franklin Medical College.—Thos. F. Betton, M. D., has been appointed Professor of the Principles and Practice of Surgery, in the place of C. C. Van Wyck, M. D., who resigns in consequence of intended removal from Philadelphia.

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Pennsylvania Hospital.—We are happy to announce the election of George Fox, M. D., as Surgeon to this Institution, in the place of the late Dr. Randolph.

Obituary Record.—With the deepest sorrow we have to record the death of Jacob Randolph, M. D., Clinical Professor of Surgery in the University of Pennsylvania, and one of the Surgeons of the Pennsylvania Hospital. Dr. Randolph was universally esteemed by his brethren for the correctness of his professional deportment, his sound surgical judgment, and his great skill as an operator. As a lithotritist he stood unrivalled; no other operator could, we believe, boast of equal success.

He died in Philadelphia, after a short illness, on the 29th of Feb., in the 52d year of his age.

The Philadelphia College of Physicians paid their respect to his memory, by attending his funeral in a body, and adopted the following Resolutions:

Resolved, That the College of Physicians deeply deplores the loss it has sustained by the demise of its late Fellow, Jacob Randolph, M. D., whose attainments, practical skill, and private worth, placed him in a position of merited eminence in our profession.

Resolved, That the condolence of the College be tendered to the family of the deceased, in their bereavement, and that a copy of these resolutions be forwarded to them, as a mark of the esteem and respect in which Dr. Randolph was held by his brother practitioners.

Resolved, That one of the Fellows be appointed to prepare a Biographical Notice of the deceased, to be read before the College, and deposited in its archives.

Dr. G. W. Norris was appointed to carry out the provisions of the last resolution.

Foreign Medical Intelligence.

ANATOMY.

Ganglionic character of the Arachnoid Membrane.—The serous investment of the brain has hitherto been considered solely in the light of a contrivance by which the integrity of the cerebral functions are maintained during any temporary change which may take place in the quantity of the circulating fluid; it has, however, been recently ascertained by Mr. Rainey, that it serves a further use, as a medium from which the ultimate fibres of the sympathetic system are distributed to the cerebral vessels. The first idea which the author conceived of the sympathetic character of the arachnoid, was from seeing a number of cords between the arachnoid and pia mater, and ramifying equally on both; the twigs supplying the former being further observed to be lost in certain minute corpuscles, in which the membrane abounded. Having satisfied himself that the above cords were in reality derived from the sympathetic system, by comparing them microscopically with other portions of that system, the author concludes that they in fact arise from the membrane itself, which stands to them in the relation of a ganglion or plexus, and is analogous to other plexuses of the same system. It must be observed, however, that the author does not consider the whole membrane to be nervous, but that this property resides chiefly in those parts which he describes as made up of a soft corpusclar matter similar to that which is seen in the true ganglia of the sympathetic.—*Medical Gazette.*

PRACTICAL MEDICINE AND PATHOLOGY.

REMARKS ON THE SICKNESS AND MORTALITY AMONG THE EMIGRANTS TO CANADA IN 1847;

With suggestions for an improved method of regulating future emigration, in a letter to Sir William Burnett, M. D., K. C. H., F. R. S., Director-General of the Medical Department of the Navy. By T. Stratton, M. D., Edinburgh; Licentiate Royal College Surgeons, Edinburgh; Hon. Member Highland Society of Canada; Member Toronto Medico-Chirurgical Society; Corresponding Member Literary and Historical Society of Quebec; Surgeon, Royal Navy, Particular Service.

The number of emigrants that left the British isles for Canada, in 1847, was three times greater than that in the season of 1846. The sickness and mortality among them, have been very great; and the distress and destitution thereby accruing to the surviving relatives, have been such as to claim from the humane all their sympathy, and from those in authority all their ability to prevent or to remedy such evils.

The following is a copy of a report by Mr. Buchanan, Chief Emigrant Agent at Quebec, of the number of emigrants that arrived at Quebec and Montreal during the season of 1847, up to the 10th of November, and com-

pared with the total number that arrived in 1846; there is also atated the mortality in 1847:—

Embarked from	Steerage.	Infants	Cabin.	1846. Total.	Steerage.	Infants	Cabin.	1847. Total.
Scotland,	1494	31	120	1645	3462	174	116	3752
England,	8435	455	273	9163	29833	2305	190	32338
Ireland,	20169	673	207	21049	51129	2835	365	54329
Germany,	875	21		896	7458	226	13	7697
Total,	30973	1180	600	32753	91882	5540	684	98106
Deduct last year's emigrants.					30973	1180	600	32753
Additional number in 1847.					60909	4360	84	65353

Number that died on the passage, - - - - - - 5,293
Admitted into Grosse Isle Quarantine Hospital, 8,563, of whom died, - - - - - - - - - - - - 3,452
Died in Quebec Marine and Emigrant Hospital, and in the city of Quebec, up to 9th October, - - - - - - - 1,041
Died in Montreal Emigrant Hospital, and in the city of Montreal, up to 1st November, - - - - - - - 3,579

Total deaths, - - - - - - 13,365

(Signed)
A. C. Buchanan, Chief Agent.

Up to the first of November, and as far inland as Montreal, one emigrant in every seven had died; many of those who passed on from Montreal, sickened and died at one or other of the different places on the route—Prescott, Brockville, Kingston, Toronto, St. Catherines, Brantford, New London, or Amherstburg; and during November and December, there have been many deaths in the different emigrant hospitals, so that it is understating the mortality to say, that of those who left Britain, one person in every five was dead by the end of the year. The number that died on the passage is 5,293. I believe I am correct in stating, that only three or four ships carried surgeons, so that almost the whole of this large number died in a situation where there was no medical aid. The proportion of passage deaths to passengers is about one in eighteen, which is in sad contrast to what it was a few years before, when it was one in two hundred, (as stated by Mr. Hawes, quoted in Dr. Combe's excellent letter on Emigration, in the *Times* of 17th September, 1847.)

In the Kingston (Canada) Emigrant Hospital, from the beginning of the season up to the 18th of October, there were 1959 admissions and 707 deaths, the mortality being 35 per cent.; and there remained 431 patients in hospital.

In the Toronto Emigrant Hospital, up to the 22d of October, there were 3300 admissions, and 757 deaths, being about 22 per cent., and 739 patients remained.

SICKNESS.

In the ships where there was so much mortality, (in some vessels one-third, and in others, three-fifths of the passengers died,) there was, of course, among the other passengers a great amount of sickness, weakening them for one, two, or three months, and incapacitating them for labor on their arrival in America.

CAUSES OF THE SICKNESS AND MORTALITY.

The sickness and mortality were almost entirely from fever, (typhus fever, and that variety of it called ship-fever,) and dysentery, and in some of the ships sailing from ports in Ireland, or from Liverpool, with Irish emigrants,

we may reasonably suppose that some of the passengers might embark infected with typhus, and this would, in a week or so, develop itself, and afterwards spread among the passengers. Dysentery arises sometimes from improper and imperfectly-cooked food, and, in certain circumstances, it also is occasionally infectious, so that it would, perhaps, spread in the same way as the fever.

The spreading of these diseases would have been much less, if it had not been aided by want of medical advice—an over-crowded state of the ship—an absence of due cleanliness—want of exercise on deck—and of proper cooking of the food.

But, on the other hand, in many of the ships, there is no reason to suppose that typhus, or its infection, or dysentery, was embarked, and the fever which appeared after leaving port, is sufficiently accounted for by the over-crowding, and the deficient ventilation, aided by the predisposing cause of low diet. Typhus arising in this way, afterwards spreads by infection, and so the remaining passengers ran two chances of being taking ill—that is, from the original cause, and from infection.

The same remark may be made regarding the dysentery; it would, in the first instance, arise from the uncooked victuals, and improper diet, and would then both continue to be produced by the original cause, and, perhaps, also be communicated by infection.* The sickness from embarked typhus, or its infection, and from dysentery, might have been much checked, and the sickness from typhus, or dysentery, springing up on board, might have been prevented by proper regulations. In some ships, from obstacles thrown in their way with regard to cooking, and, in others, from laziness, carelessness, or whatever it may be called, the passengers often did not cook their provisions at all. In others, in obeying the calls of nature, they invariably did so into the hold, and sometimes would not even leave their sleeping-berths; sometimes they would not allow the captain or crew to come down among them, afraid of being forced to wash, and to go on deck; in others, again, they were smoked out, and so forced to go on deck; and however well-intended on the part of the master this may have been, it cannot be forgotten that some, and, perhaps, many, may have been too weak either to move, or, even to be moved. Considering all these things, instead of wondering that the mortality was so great, we may feel surprised that it was not greater.

THE PASSENGERS' ACT.

The Acts of the Imperial Parliament by which emigration to North America is regulated, are the *Passengers' Act*, which was passed on the 12th August, 1842, and the *Amended Passengers' Act*, which was passed on the 22d July, 1847. Of the former Act:

Section 2. Exempts passenger-ships to North America from having to carry a surgeon. It prohibits a ship from carrying more than one person to every five register tons; and it enacts that, on the lower deck, each passenger is to have ten superficial feet of space "unoccupied by stores not being the personal luggage of passengers."

Note.—Ships ought to be obliged to carry surgeons, in cases to be afterwards mentioned. The Act ought to specify so many cubic feet of space for each passenger, *exclusive* of the space occupied by his personal baggage, for most emigrants have large chests or boxes taking up the room allowed for their owners. These boxes are often nearly empty, or, at best, contain apparel of little value even to those to whom they belong. This defect in the Act is a most important one, and ought to be immediately rectified.

Section 4 and 5. Omit to regulate the height of the berths, and also the distance between any two rows of berths.

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* Some physicians consider that dysentery is not infectious; others, that it is so, occasionally; and others, again, that it is so, only when complicated with infectious fever.

Note.—The height of the lower deck is *said* to be six feet, and the floor of the lower berth six inches above the deck, so that each berth ought to be, at least, two feet eight inches high. The space between any two rows of berths might be six or more feet.

Section 6. Provides that provisions be issued not less frequently than twice a week, and the following is the scale to be issued by the ship to those passengers who do not provide their own provisions: one pound a day of one of the following articles, namely, bread, biscuit, flour, oatmeal or rice, and half of the diet may be of potatoes, and five pounds of potatoes are to be considered as equivalent to a pound of one of the other articles.

Note.—Considering the improvidence of most of the emigrants, only one day's provisions ought to be issued at a time, as, when issued only twice a week, many of the passengers consume on that day the three or four days' provisions, and starve on the other days, and so injure themselves in three ways. Firstly, having nothing to eat on five days in the week; secondly, eating too much on the other two days; thirdly, when the intestinal canal is not distended by food to the usual extent, and on one day a quantity of it, and perhaps of a hard nature (as ship-biscuit), is eaten, painful distension of the canal, or griping, or inflammation, is apt to be induced. This irregularity in diet is also favorable to the production of diarrhœa and dysentery.

With regard to the *quality* of the diet:—Bread may be left out of the question, as, for any great number of persons on ship-board, there is no convenience for baking it. Oatmeal is much preferable to wheaten flour, and care ought to be taken, and very often is not taken, that it be cooked properly, and not taken with cold water only, and also that it be eaten with salt. Taking the diet as above, a good arrangement of it might be, on three days a week, half diet of potatoes, and half diet of oatmeal; on two days, biscuit; on one day, flour; and on another day, rice; and any deviation from this, to be towards oatmeal.

But with respect to the *quantity* of provisions, the above scale may do on an emergency, or for about a week; for a fortnight, double the quantity might be issued, and for any longer period, about three times the allowance would not be too much for the purpose of landing the emigrants in the state of health and vigor necessary for their immediately engaging in laborious occupations. Tea and sugar ought to be issued daily, and beef or pork, if not daily, ought to be granted twice or thrice a week. A sufficiently full and varied diet will keep the emigrant in good health, and enable him to provide for himself and his family on his arrival; while an unvaried diet, insufficient in quantity, predisposes him to disease, or actually induces it; by a moderately liberal scale of victualling, the interests of both humanity and economy are at the same time served.

The scale in the Act was intended only for the emergency of the emigrant after his private stock of provisions might have been exhausted. In the past season, many emigrants embarked without any private stock at all. Either from their private store or from the ship, a suitable scale of diet might be, daily, a small quantity of potatoes or other vegetables; tea and sugar sufficient for a morning and evening meal; a pound of bread, oatmeal, biscuit, or flour, and half a pound of beef or pork, the latter with pease-soup.

Section 10. Speaks of "the victualling of the crew and other persons (if any) on board."

Note.—The master, crew, cabin and steerage passengers, ought to be all numbered together; referring to "other persons," is giving an opportunity for the vessel to have more passengers than the Act is *intended* to allow.

Section 13. In prescribing the number of boats to be carried by ships of a certain size, it might be specified that the boats are to be able to carry about *so many* persons, as a ship may observe the *wording* of the Act, and still have boats unusually small, and insufficiently large for the object in view.

Section 18. Allows a ship that has cleared with an insufficient number of passengers, to embark others at other places, where there may be no custom-

house officer, or emigration-agent, and consequently no check on the vessel's carrying more than the allowed number.

I heard of a ship that cleared with the full number of passengers, and then dropped a few miles down the river, and in the dusk, a number of carpenters came on board with wood, and in an hour or two, put up rows of berths in places where there was properly no room for them; then about 100, or more, emigrants came on board, and the ship sailed.

Section 51. States that "cabin passengers" are not included among the "passengers."

Note.—However the second section numbers the master and the crew along with the passengers, they ought to be all numbered together, otherwise it leaves an opening for "evading the Act," as, if a ship has more than the allowed number of steerage-passengers, some of them, during the time of inspection, may be passed off as cabin-passengers, and others, as belonging to the crew.

Having thus made a few remarks on what is contained in the Act, I now beg to offer some observations on what is omitted in it.

The Act ought to prohibit the washing of the lower deck oftener than once a week, and not even then, without previously obtaining permission from the surgeon; the deck to be washed *after* the passengers have breakfasted, and before noon, and with no more water than is absolutely necessary. Much disease is produced on board ship, by the too frequent washing of the lower deck; too much water also is generally used, and the consequence is, that a deck has hardly time to dry till it is washed again.

The bad results of this system are well known; catarrh, rheumatism, and other complaints are induced in the case of robust seamen, and still more readily in the instance of women and children, and this for two reasons, both on account of their weakness, and from their being more in the damp atmosphere. In some of the emigrant ships, the washing of the lower deck interfered with the cooking of breakfast, and when delayed till the afternoon, the deck is not dry by the usual time of retiring to rest.

The Act ought to prohibit any sailing ship that carries more than 40 or 50 steerage-passengers, from leaving Britain for British North America at a date in the season later than the 1st of August (perhaps the 1st or the 15th July would be a better date), as when vessels arrive in October or November, emigrants have no time before winter, to settle on land, or easily to obtain employment. The ship *Lord Ashburton*, with 470 passengers* from Liverpool, arrived at Quebec on the 1st of November, and the *Richard Watson*, with 170 passengers from Sligo, arrived at the same port on the 7th November, a date much too late. In the latter vessel, there were several deaths from cold, some of the children having no clothing whatever, and their relatives not being able to spare them any of their own.

THE AMENDED PASSENGERS' ACT.

This Act makes the *Passengers' Act* apply to vessels carrying more than one person to every twenty-five register-tons, the former Act referring to thirty tons.

OF THE EXPENSE OF THE EMIGRANT HOSPITALS IN CANADA IN 1847.

I am informed, that up to the end of December, the expense of the Grosse Isle Quarantine establishment, and of the Emigrant hospitals in various parts of the province, has amounted to about £100,000 sterling, which is more than one pound sterling for each emigrant that left Britain for Canada; besides the above outlay by Government, there are the expenses of private subscriptions for maintaining widows and orphans. I am inclined to think, that

* Of whom 64 died on the passage; by the time they reached Montreal there were 120 deaths among them; in this ship the custom was for the passengers to eat their provisions uncooked.

by an improved scale of diet, and by every ship carrying a government-surgeon, nearly all of the above sickness, mortality, and expense, might be avoided, and this at a cost which would be, perhaps, a tenth, or at most a fifth of the expenditure caused by the emigrant sickness in 1847.

OF APPOINTING SURGEONS TO EMIGRANT SHIPS TO NORTH AMERICA.

There are, at present, two things wanted in emigrant ships to North America: one is, to have a government-agent on board to prevent too many persons being embarked, and to see that the passengers have justice done them, with respect to their provisions, water, accommodations, convenience for cooking, ventilation, &c.; the other desideratum is, to have a surgeon; and some consider that it would be difficult, or impossible, to procure as many medical men as would be required for the purpose, and there certainly will, and ought to be great difficulty in doing so, if the remunerating of them be left in the hands of the ship-owners, who have not the inclination to pay them according to the value of the services rendered.

The advantage of having a government-agent, and also a surgeon, may be conveniently combined, by the Act requiring that every sailing-vessel to N. America, which carries more than 60 persons (master, crew, cabin and steerage-passengers included) shall have on board a naval medical officer, who shall be in the same position, and have the same charge and responsibility as the surgeon-superintendent of a convict-ship. A sum equal to his pay and expenses, might be charged by Government to the ship, and he, appointed and paid by the Admiralty, would be independent of the owners, and would see that the passengers were fairly treated in all respects, and that no more than the allowed number was embarked.

To ships carrying under 150 passengers (crew, cabin and steerage-passengers included), there might be appointed an Assistant-Surgeon of the Royal Navy of at least four years' standing; he, to have full-pay from the date of appointment, and for five weeks after the ship's arrival in the destined American port: to have travelling expenses from London, or elsewhere, to the British or Irish port of departure; to mess in the cabin with the master, and at the ship's expense; his connexion with the ship to cease on the emigrants leaving it; to have certain travelling expenses from Quebec, &c., to New York, Boston or Halifax, for the purpose of proceeding home by the first Halifax Mail Steamer, and in which his passage would be paid; also, that his remuneration might bear some proportion to his trouble, he might have allowed him some sum, say five shillings for each passenger *landed in America*.

To ships carrying more than 150 persons, a Surgeon of the Royal Navy to be appointed as above.

It has been said, that it would be impossible to obtain a sufficient number of surgeons for emigrant-ships, and certainly, even if sufficiently well paid, it would not be an easy matter to procure, from among civil surgeons, a sufficient number, as it would never answer for a private practitioner to leave his practice for a few months to embark on this service. But by having recourse to the navy medical department, there would be no difficulty; as on their return to Britain, if these medical officers did not make a second American voyage that season, some naval appointment would perhaps be falling vacant, or, in any case, they might, in the usual way, go on half-pay, for a short season. The period of service in emigrant-ships ought, of course, to count the same as service in one of Her Majesty's ships.

SUGGESTIONS FOR AN IMPROVED EMIGRATION SYSTEM.

I may now recapitulate some of the amendments I beg to propose on the present mode of conducting emigration to North America:—

1st. Every sailing vessel carrying more than sixty persons, to have on board a naval medical officer.

2d. No sailing vessel having more than 40 or 50 steerage passengers, to be allowed to leave the British Isles for British North America at a date in

the season later than the 1st of August, (perhaps the 1st or 15th of July would be a better date.)

3d. The present scale of provisions to be re-considered, and the question entertained, whether it might not be made greater in quantity, and more varied in kind, with advantage, not only to the emigrants, but also to Government.

4th. Each passenger to have *so many* cubic feet of space, *exclusive of the room occupied by his personal baggage.*

5th. Several other corrections of, and additions to, the *Passengers' Act*, are given above, and I may now conclude these brief remarks with observing, that although this letter be addressed to Sir William Burnett, M. D., I have introduced some medical details and explanations, from considering that it may come under the notice of non-professional readers.

For the last four months, since August, 1847, I have been constantly engaged, professionally, in the emigrant hospitals of Grosse Isle, Quebec, or Montreal, and have had ample and varied opportunities of witnessing the condition of the emigrants, both healthy and sick.

I have been occupied in making observations on the disinfecting fluids of Sir William Burnett, M. D., and of Mr. Ledoyen, the former of which is composed of the chloride of zinc, and the latter of the nitrate of lead; and after a sufficiently long observation of the effects of both, I give a decided preference to the fluid of Sir William Burnett.

The solution of the chloride of zinc possesses several great recommendations, and these are not counterbalanced in the least by any inconvenient results. It is much superior to the solution of the nitrate of lead, both, positively, and also on account of Mr. Ledoyen's fluid, like the other preparations of lead, being liable to produce one or other of their long-known bad effects, such as colic, palsy, apoplexy, wasting of the body, permanent decrepitude, and particularly in typhus, a depressing effect, which is the exact opposite of the one that is required in that disease. The proprietors of the Ledoyen fluid used it in considerable quantity in three cases of typhus; cloths wet with it were applied to nearly the whole surface of the body. These three cases were, I believe, the only instances in Canada where the fluid was much applied to individual patients ill of typhus, and all of them ended fatally.

Laying aside, for a moment, considerations of humanity, it is, indeed, singularly absurd and ridiculous that the proprietors of Mr. Ledoyen's fluid should have recommended it as a certain cure for typhus, when it so happens, that on account of its sedative and depressing effects, it is positively injurious, and apt to be fatal.

On the lower decks of emigrant-ships, ventilation ought to be as much attended to as the weather will permit, and it will be highly conducive to comfort and health to use Sir William Burnett's Fluid daily. The proportion of one ounce of the strong fluid to every ten persons, is sufficient in ordinary cases; where there is much dysentery, twice or thrice this quantity may be used.

During the past season, in Canada, a great many medical men, clergymen, magistrates, and others, have died of emigrant fever; and, emigrants going out as servants to places in the country have, soon after, taken fever, and died; and the disease has extended itself finally to several others in the house.

I have written these brief remarks in the midst of more pressing engagements, and have not done the subject the justice which its importance merits; but I hope I have said enough to show that there are two ways of managing British Emigration to North America. One is that of imperfect regulations, imperfectly carried out, the consequences of which are, great sickness and mortality among the emigrants, both on the passage, and after their arrival; distress and destitution among the surviving widows and orphans; the loss of many valuable lives in Canada from the spread of emigrant-fever throughout the province; expense to private individuals in providing for widows

and orphans, and the outlay, by Government, of about £100,000 sterling, in supporting emigrant hospitals. And, on the other hand, I have endeavored to show that, by amending the *Passengers' Act*, as is herein proposed, all the above evils may be entirely, or almost entirely prevented; added to which, the expense of the plan would probably be about one-tenth, or one-fifth of the sum that the emigrant sickness of 1847 has cost, and a successful attention would thereby be given to the interests, both of humanity and of economy,

T. Stratton, M. D., *R. N.*

Montreal, 1st January, 1848.

P. S.—Since the above was written, it was officially announced on the 2d of March, in the Legislative Assembly, that for the relief of emigrants this season, there had been already expended the sum of £148,000 currency, and about £12,000 more remained to be paid. Besides this total of £160,000 currency, or £131,000 sterling, the expense of the emigrant hospitals for ten weeks more, up to the middle of May, properly belongs to the season of 1847. T. S.

Montreal, 4th March, 1848.

British Amer. Jour. Med. and Phys. Sciences.

We add the main features of a bill for the same objects introduced into the House of Representatives (U. S.) by Mr. Grinnell, and which has since become a law.

"1. That all vessels, whether of the United States or any other country, having sufficient capacity, according to law, for fifty or more passengers (other than cabin passengers) shall, when employed in transporting such passengers between the United States and Europe, have on the upper deck, for the use of such passengers, a house over the passage-way leading to the apartment allotted to such passengers below deck, not less than four feet by five feet on the deck and five feet high, firmly secured to the deck or combings of the hatch, with two doors, the sills of which shall be at least one foot above the deck, and also with two windows, so constructed that one door or window in such house may, at all times, be left open for ventilation; and all vessels so employed, and having the capacity to carry one hundred and fifty such passengers or more, shall have two such houses; and the stairs or ladder leading down to the aforesaid apartment, shall be furnished with a hand-rail of wood or strong rope.

2. Every such vessel so employed, and having the capacity for more than one hundred passengers, shall have at least two ventilators, to purify the apartments, &c.

3. All vessels employed as aforesaid, and carrying more than fifty such passengers, shall have a camboose or cooking-range on deck, housed and conveniently arranged for the use of the passengers; and if carrying more than two hundred, and not more than three hundred passengers, then two such cambooses or cooking ranges, &c.

4. All vessels shall have on board, for the use of such passengers, at the time of leaving the port whence such vessel shall sail, well secured under deck, for each passenger, at least fifteen pounds of good navy bread, ten pounds of rice, ten pounds of oatmeal, ten pounds of wheat flour, ten pounds of peas and beans, thirty-five pounds of potatoes, one pint of vinegar, sixty gallons of fresh water, ten pounds of salted pork, free of bone, all to be of good quality, and a sufficient supply of fuel for cooking; but at places where either rice, oatmeal, wheat flour, or peas and beans cannot be procured, of good quality, and on reasonable terms, the quantity of either or any of the other last named articles, may be increased and substituted therefor; and in case potatoes cannot be procured on reasonable terms, one pound of either of said articles may be substituted in lieu of five pounds of potatoes; and the captains of such vessels shall deliver to each passenger at least one-tenth part of the aforesaid provisions weekly, commencing on the day of sailing; and daily at least three quarts of water, with sufficient fuel for cooking; and if the passengers on board of any such vessel in which the provisions,

fuel and water herein required, shall not have been provided, as aforesaid, shall at any time be put on short allowance during any voyage, the master or owner of any such vessel shall pay to each and every passenger who shall have been put on short allowance, the sum of three dollars for each and every day they may have been on such short allowance, to be recovered in the same manner as seamen's wages are or may be recovered.

5. The captain of any such vessel so employed, is authorized to maintain good discipline, and such habits of cleanliness among such passengers as will tend to the preservation and promotion of health.

A number of specifications follow.

6. The master and owner or owners of any such vessels so employed, who shall not comply with the directions of the first and third sections of this act, shall severally forfeit and pay to the United States, the sum of two hundred dollars, for each and every violation of, or neglect to conform to the provisions of each of said sections; and fifty dollars for each and every neglect or violation of any of the provisions of the fifth section of this act.

7. Requires the collectors of customs to appoint an officer to examine emigrant vessels.

8. Amends the act 'regulating the carriage of passengers in merchant vessels,' so as to allow sixteen superficial feet on deck for each passenger, when the height between decks is less than six feet; when less than five feet, twenty-two feet are allowed.

9. This act shall take effect, in respect to such vessels sailing from ports in the United States, in thirty days from the time of its approval; and in respect to every such vessel sailing from ports in Europe, in sixty days after such approval; and it is made the duty of the Secretary of State to give notice in the ports of Europe, of this act, in such a manner as he may deem proper.

10. So much of the first section of the act entitled 'An act regulating passenger ships and vessels,' approved March 2d, 1819, or any other act that limits the number of passengers to two for every five tons, is repealed."

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Registrar-General's Return—Mortality from Epidemic Influenza during the last quarter.—The last Quarterly return of the Mortality in 117 districts of England, issued by the Registrar-General, is of unusual interest in a medical point of view. Our professional readers will be prepared for the announcement of a great increase in the number of deaths; and it may be useful, in relation to the history of the epidemic which has been the cause of this increase, to direct attention to some of the principal facts connected with its progress and mortality. These are ably analyzed in the table before us.

The 117 districts comprise thirty-six in the metropolis, and eighty-one in the provinces, including the principal towns and cities of England. The population of these districts was, in 1841, 6,612,800, and they have hitherto returned less than half the deaths in England. The excess of deaths in the last quarter was no less than *thirty-five thousand* above the corrected average of 1839-45. The surplus mortality, therefore, may be compared to the sudden destruction of the whole population of one of our large provincial towns! The increased mortality in the metropolitan districts may be estimated from the following statements. The deaths registered in the quarter ending

December	1845, were	11,838
"	1846, "	13,221
"	1847, "	18,553

The deaths in the quarter just terminated exceed, by nearly *four thousand*, the greatest number of deaths which have been registered in the same quarter for the last nine years! The annual mortality of London, during six weeks, was, in fact, raised from 2.52 to 4.57 per cent.; in one district it was as high as 7.5 per cent., in other words, the usual rate of mortality was trebled.

As we might have anticipated, the epidemic killed twice as many people

in the *insalubrious* parts of London as it did in those less unhealthy; its fatality in Lewisham and St. George's in the east, was in the ratio of 1 to 4. This is an important fact for the consideration of those who are exerting themselves in endeavoring to remove and suppress nuisances.

"In April and May, typhus became epidemic; instead of the average of 34, *fifty* died weekly; it steadily spread until it killed a hundred and eleven victims in a single week. Diarrhœa, dysentery and cholera had been a little more fatal than usual throughout the year: 17, however, only died of these diseases in the first week of July; the mean temperature of the air was above 60°; the number of deaths rose to 38, 47, 67, 125, 128, 188, by the middle of August, and then gradually subsided. Notwithstanding the continued prevalence of typhus and scarlatina, the deaths in the last week of October were only 945; one person died of influenza, 36 of bronchitis, (inflammation of the air tubes,) and sixty-two of pneumonia (inflammation of the substance of the lungs). In the three weeks following, ending Nov. 20, the total deaths were 1052, 1098, and 1086; of which 2, 4 and 4 were by influenza; 49, 58 and 61 by bronchitis; 68, 79 and 95 by pneumonia. The wind had generally been blowing S. S. W. and S. W. since the first week of October; the weather was unusually warm; a brilliant aurora was observed, and shook the magnets on October 24: it appeared eight times during the quarter. On Tuesday, November 16th, there was a remarkable darkness; the wind changed to N. W., and, amidst various changes, still blew from the north over Greenwich at the rate of 160 and 250 miles a day. The mean temperature of the air suddenly fell from 11° above to 10° below the average; on Monday it was 54°, Friday 32°; the air on Friday night was 27°, the earth was frozen; the wind was calm three days, and on Saturday evening a dense fog lay over the Thames and London for the space of five hours. No electricity stirred in the air during the week. All was still: as if Nature held her breath at the sight of the destroyer, come forth to sacrifice her children. On Sunday the sky was overcast, the air damp, the wind changed in the night to S. by E., and passed for four days over Greenwich at the rate of 200 and 300 miles daily: the temperature suddenly rose, and remained from 2° to 9° above the average through the week ending November 27th, when the deaths of 1677 persons, 819 males and 858 females, were registered; 771 persons under 15 years of age, 518 aged 15—60 and 388 of the age of 60 and upwards. Influenza was epidemic. On the first week of December, *two thousand four hundred and fifty-four* persons died: 1141 were males, 1313 females; 1012 children, 712 persons in the prime of life, 730 of the age of 60 and upwards. On the week following, *two thousand four hundred and sixteen* persons died: 1175 males, 1241 females; 1016 under the age of 15; 698 at the age of 15—60 and 702 at the age of 60 and upwards. The deaths in the weeks ending Saturday, December 18, December 25, and January 1, were 1946, 1247 and 1599. 11339 persons died in six weeks, and altogether the epidemic carried off more than 5000 souls over and above the mortality of the season. The epidemic attained the greatest intensity in the second week of its course; raged with nearly equal violence through the *third* week; declined in the *fourth*, and then partly subsided; but the temperature falling, the mortality remained high not only through December, but through the month of January."

We may now proceed to examine the influence of *age* and *sex* upon the rate of mortality. It would appear from the return, that the epidemic was most fatal to adults and to the aged. The mortality in childhood was raised 83 per cent.; in manhood, 104 per cent.; in old age, 247 per cent. Between the ages of 4 and 25 the mortality was comparatively not much increased; and at the age of 10—15, the healthiest period of life, it was scarcely increased at all. In estimating the relative mortality of the *sexes*, it must be remembered that at all ages there are more females than males living in London. We must go back to the census of 1841 for the comparison, and then we find that at and above—

Years of age.

55 there were living { 71384 males, 90328 females.

75 " " { 6788 males, 11147 females.

Hence it follows that all diseases which are attended with a great increase of mortality at an advanced period of life, must cause a greater number of deaths among females than males, although the disease itself may not really be more fatal to one sex than the other. The difference of result, therefore, is merely numerical, and it does not appear that there was any appreciable difference in the proportion of deaths caused by this epidemic in the sexes.

A more material modifying condition was the state of *health or disease* of the individual. The influence of this condition was not so much manifested with respect to the numbers attacked; for the healthy and the diseased were equally attacked by influenza—as with respect to its fatal effects.

"The vital force was extinguished in old age and chronic diseases. The poison, permeating the whole system, fastens chiefly on the mucous membrane lining the sinuses of the face and head, and the air-tubes of the lungs. Hence it is fatal to the asthmatic. The deaths directly ascribed to asthma in October and November were 12 weekly; in the six weeks of the influenza epidemic, 77, 86, 78, 52, 14, 26, besides the numerous cases classed under influenza. 36 deaths were ascribed to bronchitis in the week ending October 30th, and 49, 58, 61, 196, 343, 299, 234, 107 and 138 in the nine following weeks. 62 deaths were ascribed to pneumonia in the same week, and 68, 79, 95, 170, 306, 294, 189, 131, 148, in the nine weeks following. In some of these cases, the inflammation specified was the primary disease, in others secondary, and in many it was purely influenza—mis-reported. There is a strong disposition among some English practitioners, not only to localize disease, but to see nothing but a local disease; hence, although it is certain that the high mortality on record was the immediate result of the epidemic of influenza, the deaths referred to that cause are only 1157; namely, in the first week of November 2, and in the eight weeks following, 4, 4, 36, 198, 374, 270, 142, 127, and these include nearly all the cases in which influenza was returned, whether as primary, or secondary in conjunction with other diseases. A similar defect has hitherto been found in the returns of all great epidemics. In 1665, the great plague year, 97306 burials were returned in the London Bills of Mortality, only 68596 of which were ascribed to plague. Influenza attacked persons laboring under other zimotic diseases: thus the deaths from hooping-cough rose from 12 and 25 to 65 and 71 during the epidemic. The deaths from measles rose from 43 to 96, 89, 69, 75, during the first four weeks of the epidemic, and then subsided to 37 and 58. Typhus, which had been fatal to 70 and 80 weekly, rose to 132, 136 and 131, in the second, third and fourth week of the influenza epidemic, and then fell to 83 and 74. Although influenza is not mentioned in these cases, it is in others, and there can be little doubt that two or more zymotic processes do often go on simultaneously in the blood and body—a fact of profound interest to the pathologist, and worthy of attentive investigation.

The following remarks respecting the probable origin and mode of diffusion of influenza will be found of interest:—

"Influenza, like small-pox, probably always exists; in ordinary circumstances, it is confounded with inflammation of the air-tubes, yet in London from one to five deaths have been directly referred to it, nearly every week since the new London tables were published. Like other zymotic diseases, it becomes at intervals of some years epidemic; that is, it attacks the people generally of all classes. Its epidemics are distinguished by the numbers they assail—by affecting the same persons more than once—by being most fatal to the aged of both sexes, and, therefore, where there are more old women than old men, causing the deaths of females to exceed those of males during their prevalence—by great differences in the severity and fatality of

their attacks—by the rapidity of their course, and passage from place to place. After the mortality they occasion becomes apparent in London, it attains a maximum in the second or third week; and the mortality falls to the average in the sixth or seventh week. Influenza appears to be generated in ill-organized camps, in crowded, ill-cleansed cities; and to be most fatal among people who have for some time before been depressed, ill-fed or ill-supplied with vegetables, as after hard winters and in war: it rages in cold and hot, moist and dry weather, but most frequently breaks out after a thaw, or with violence after a fog, generally the result of cold streams of air mixed with warm air—and a calm. The saturation of the atmosphere favors the transformation of all organic matters; and those of a zymotic character among the rest. Extreme cold only never raises the weekly mortality in London above 1500; extreme heat still less; intermediate changes affect the mortality but slightly in ordinary circumstances. November fogs occur every year without giving rise to influenza: in November, 1847, the weather was nearly the same all over England, yet influenza did not break out simultaneously. When once generated, the epidemic spreads through the air. The great epidemics generally travel from Russia, over Germany, Denmark, Sweden, England, France, Italy, Spain—in from three to six months; and then reach America. Influenza is often associated with other epidemics. It appears to have preceded or accompanied the plague in the Black Death of the 14th century; it preceded the great plague of London (1665); it followed epidemic typhus in London in 1803, preceded it in 1837, occurred in the midst of the typhus epidemic of 1847, preceded and followed the epidemic cholera in 1831-2-3. It carries off asthmatic persons, and those suffering from chronic disease. It affects those laboring under other zymotic diseases; in the healthy it quickens the seeds of other maladies, particularly of the lungs. The fatality and duration of attacks vary with age: in some of the late epidemics 2 in 100 cases attended by medical men are said to have died. If this was the rate of mortality in London, for 5000 deaths there must have been 250,000 cases of sickness of not less than seven days' duration. This would be little more than one in eight of the population; but nearly all were affected more or less: and, without taking slight instances, it is probable that not less than 500,000 persons in 2,100,000, suffered in London from the epidemic of 1847.

"The English physicians of the 18th century agreed in pronouncing influenza *contagious*. By this they did not mean that it was propagated by *contact*, but that it was introduced into cities, institutions and houses in England by persons actually affected by the disease. This notion is, however, too exclusive; the word 'contagion,' applied to influenza or cholera, is apt to mislead, and to have practically a bad effect. When people ask if a disease is contagious, they generally mean: 'Are we more likely to have influenza or cholera if we touch or go near persons laboring under these diseases?' Now if the matter of contagion is very diffusible, and is distributed equally through the room, the house, the street, the city in which a patient is lodged, no one living in the house, street or city is much more likely to be infected if he approach the sufferer than if he remain in absolute solitude, shut up like the grocer of Wood-street in the plague. The matters which excite influenza and cholera are evidently highly diffusible; in a few days influenza spread all over London; it met you everywhere: nobody, therefore, has attempted to show that medical men, nurses, or others in attendance on the sick, suffered more than other people. If such should ever be the case either in the influenza or the cholera epidemics, it will be in rare circumstances, and should never deter the most timid from discharging their duties to the sick.

"The earth, it is well known, is surrounded by an atmosphere of organic matter, as well as of oxygen, nitrogen, carbonic acid, and watery vapor. This matter varies, and is constantly undergoing transformations from organic elements: it can neither be seen, weighed nor measured. The chemist cannot yet test its qualities. Liebig, with all the appliances of the Giessen laboratory, cannot yet detect any difference between the pure air of the Alps, and the air through which the hound can tell a hare, a fox, or a man has

passed; or the air which observation shows will produce small-pox, measles, scarlatina, hooping-cough, dysentery, cholera, influenza, typhus, plague. These matters may either be in a state of vapor, that is, elastic, or inelastic; or, like water, they may exist in both states. They are most probably in the state of suspension; hang, like the smoke in cities, over the places in which they are produced, but are spread and driven about like vesicular water in clouds. A stream of aqueous vapor of the same elasticity from the Atlantic, passing over England, is, in one place, perfectly transparent; in another, mist; in another, rain: so clouds of infectious matter may fleet over the country, and in one place pass harmless by, in another (as influenza in London) destroy thousands of lives. The emanations from the living, the graves, the slaughterhouses, the heaps of filth rotting, the Thames—into which the sewers still empty—raise over London a canopy which is constantly pervaded by zymotic matters; in one season this, in another that, preponderating; and the epidemic influenza may easily be conceived either to have broken out spontaneously, to have been conveyed here by ships, or to have been brought over by the winds.

"The zymotic hypothesis, here so well stated, explains the phenomena to a certain extent. Still epidemics afford a vast field for research; for much remains to be investigated. The mariner, however, steers his ship without knowing whence the winds come, whither they are going, or why they are blowing; so, as the returns adduced above, establish beyond a doubt the fact, that influenza was four times as fatal in one part of the population of London as it was in another, and that it is much more fatal in a part commonly insalubrious than in a part usually healthy, the course to be pursued is plain. If the means which improve the public health are applied with intelligence and energy, the general mortality can be reduced, and the ravages either of any future influenza, or of the coming cholera, can be rendered inconsiderable.—*London Medical Gazette.*

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Urine in Typhoid Fever.—M. Martin Solon lectured on the state of the urine in typhoid fever: his conclusions were as follows:—1. The urine is less abundant, of a high color, and more dense than in health, it is almost always acid. 2. Alkalinity of the urine is rare; nevertheless, in typhoid fever, the urine quickly passes into the alkaline state, from the superabundant quantity of urea contained in it. This quantity is sometimes so considerable that it is possible to obtain crystals of the nitrate of urea without previous evaporation. 3. Though habitually clear, the urine of typhoid patients sometimes exhibits a mucous cloud. 4. The clear urine sometimes remains unchanged under nitric acid, at others a slight cloudiness is produced. 5. This cloud is formed of the bi-urate of ammonia, and is seen at certain periods of fever, especially towards the crisis. 6. The bile undergoes a sensible change during the progress of fever, which change is doubtless the cause of the appearance of *bili-verdine* in the urine. 7. Albuminuria is a frequent temporary phenomenon in fever; and generally indicates a severe case. 8. Much advantage to prognosis and treatment may accrue from the inspection of the urine in fever.

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Remarks on the Action of Narcotic poisons—the Effects of Chloroform, and the stages of Insensibility produced by it.—Treatment of Cases of Poisoning by the Vapor.—By Francis Sibson, *Esq.—General Hospital, near Nottingham.*—The death of Hannah Greener, under the influence of chloroform, painfully reminds us that chloroform is not only an admirable anæsthetic, but that it is also a narcotic poison of great power and rapid action. Chloroform, ether and alcohol, are closely allied both as anæsthetic agents and as narcotic poisons. In small repeated doses they produce agreeable exhilaration and pleasing hallucinations. A friend informs me that he has frequently produced, by merely inhaling chloroform from a bottle, the most delightful thrill over his whole frame. These narcotics, carried by the blood into every capillary, excite simultaneously every part of the frame. The

action on the capillaries themselves is universal; they enlarge and are distended with blood, which now circulates through capillaries previously invisible. The conjunctiva becomes injected, and the lips and cheeks are turgid. The secretions are consequently increased, the eyes become watery, and saliva collects in the mouth; while the visible capillaries are turgid, the capillaries in the brain, the lungs, and the other viscera, are turgid likewise.

Turgidity of the capillaries is an effect characterizing the narcotic poisons. Alston observed this in frogs poisoned by opium. I dipped the limb of a frog into a watery infusion of opium: all the capillaries of the limb were soon injected with blood. Mr. Nunnely has noticed the remarkable reddening from the distension of the capillaries produced by prussic acid. Stramonium, hyoscyamus, and belladonna, often excite universal redness of the skin. The experiments of Mr. Wakley show that ether and chloroform cause distension of the capillaries in the lungs and other internal organs.

The action of chloroform, ether and alcohol, pervades the whole frame. In the first stage, the excitability of every organ and fibre is exalted, but throughout, their marked action is upon the brain. Exhileration is followed by excitement, excitement by cerebral disturbance. At this stage, the person affected revels in the absurdities of social intoxication: consciousness still exists, but it is deranged. The mind is intent in its own way on many things, but does not now observe all personal realities. The mind often at this stage does not feel pain, simply because it is intently taken up with other things, just as a man in battle often does not feel a wound. This state of deranged consciousness is also that of staggering intoxication, the muscular power and control being enfeebled, and sensation blunted.

This stage of cerebral excitement and disturbance is speedily followed by the stage of cerebral sleep. There is unconsciousness, but not coma; the person sometimes can be roused, the eye turns up as in sleep, and the iris contracts. Now in all persons free from cerebral disease the pupils contract during sleep. I have opened the eyes of many sleepers, and, the brain being sound, I invariably found the pupils contracted. The sounder the sleep, the smaller the pupil. In all persons the pupil dilates as soon as they awake, and if their sleep be sound, the dilatation is gradual.

I first noticed the contracted pupil, during sleep, in a patient under the general influence of belladonna; his pupils when awake were largely dilated. I lifted his eyelids, when asleep, and found them contracted; he awoke, and instantly they dilated. Opium produces an almost characteristic contraction of the pupil; it causes, in fact, a deep but rousable sleep—a true sopor.

Opium is not the only narcotic that induces contracted pupils. Dr. Ogston found that of 22 persons poisoned by alcohol, 6 had contracted pupil. In one case, on evacuating the stomach, dilatation of the pupil gave immediate place to contraction; and, according to Bedingfield, who witnessed many cases poisoned with rum, the patient will recover if the iris be contractile, but if it be dilated and motionless, recovery is improbable.

Under the increasing influence of ether and chloroform the pupils first contract, then oscillate between contraction and dilatation, and finally dilate. So long as the pupil is contracted, a dreamy state often exists, and the patient, when operated upon, frequently manifests an unremembered consciousness; he is, in fact, in the state of sopor. When the pupils dilate, and the iris is immovable, consciousness is extinguished, and the patient is in the state of coma.

In 15 dogs in which Dr. Percy injected alcohol into the stomach, veins, or arteries,

The pupil was contracted in	- - -	4
"	first contracted then dilated in -	2
"	contracted and dilated alternately in	3
"	first dilated and then contracted in -	1
	and dilate din - - - - -	5

I have met with notices of one case of poisoning by carbonic acid, one by

aconite, and one by oil of bitter almonds, in which the pupils were contracted; and in one dog, poisoned by prussic acid, Mr. Nunnely found that the pupils were contracted.

Contracted pupil is not, then, absolutely characteristic of poisoning by opium, for it may exist in poisoning by alcohol, ether, chloroform, carbonic acid, aconite, and oil of bitter almonds, and *prussic acid?* (in one dog). In all of these, save opium, the pupils are dilated in the extreme action of the poison; and even in poisoning by opium, although contracted pupil be the almost invariable rule, yet now and then a case is met with in which the pupil is dilated. I have, indeed, found notices of two cases of poisoning by opium, and three by morphia, in which the pupils were dilated. I do not include any case before that of Dr. Kinnis, who was, I believe, the first distinctly to report that opium caused contraction of the pupil.

The remaining narcotics always cause dilatation of the pupil, viz.:—belladonna, hyosciamus, stramonium, characterized by cerebral excitement and disturbance; tobacco; digitalis; conium; wourali; *prussic acid*, with the exception noted above; parsnip root; œnanthe crocata; nux vomica, and strychnia.

Valentin considers, from anatomical grounds, and from observation on rabbits, that the contraction of the pupil is due to the reflex function of the brain* through the ciliary filaments from the motor oculi, and that the dilatation of the pupil is due to the reflex function of the spinal marrow through the ciliary filaments from the cervico-spinal nerves. I conceive that this view is borne out by physiological and pathological observations.

A boy was brought dead to this hospital from a recent destructive injury to the brain: the pupils were widely dilated. Here the reflex function of the brain was destroyed, while that of the spinal marrow still existed. Next day I found the pupils of a medium size—a proof, I conceive, that the reflex functions of both spinal marrow and brain were then destroyed.

In sleep or sopor, consciousness and volition are absent, but the cerebral reflex function is still active, and induces contraction of the pupil; but in coma or cerebral disease the reflex function of the brain is often destroyed. I opened the eyelids of a boy asleep and ill with fever, who had passed a delirious night: the pupils were dilated. Next morning, after passing a good night, I found them contracted during sleep: when he awoke, they dilated.

It is not easy to explain the comparative dilatation caused by arousing a person from sleep. I conceive it to be thus:—During healthy consciousness, the reflex functions are controlled by the mind, so that the spinal action of dilatation of the pupil, and the cerebral action of its contraction—each prevails in turn according to the present need. If the control of the mind be removed, as in sleep, the reflex action of the brain predominates, and the pupils are contracted.

Certain poisons—viz. belladonna, hyoscyamus, and stramonium—act immediately upon the brain, disturbing and progressively destroying both its mental and reflex functions. Such poisons invariably cause dilatation of the pupil, owing to the spinal reflex functions being still active.

On the other hand, strychnia so excites the reflex functions of the spinal marrow, that the brain loses control over them: tetanic convulsions ensue, and the pupils are dilated. When the pupil becomes fixed, it is a proof that the cerebral function is suspended.

So long as respiration continues, it is manifest that the spinal marrow, from the medulla oblongata downwards, is still alive. The nerves that supply the diaphragm and all the muscles of respiration that expand the chest, come off from the spinal marrow below the medulla oblongata. It is then erroneous to say that the medulla alone lives at this stage—the spinal marrow is alive also, its functions being necessary to support life. As the

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* By the reflex function of the brain is meant the excito-motory function of that portion of the true spinal system of Dr. Marshall Hall, which is seated above the medulla oblongata.

action of chloroform increases, costal respiration ceases, and the diaphragm only acts, the functions of the spinal marrow being gradually destroyed from below upwards.

During the stage of sopor there is frequently rigidity of certain muscles, as those of the jaw; this I conceive to be due to the gradual withdrawal of the control of the mind from the reflex functions.

This rigidity is speedily followed by complete relaxation of all the voluntary muscles, save those of respiration. Mr. Tracey found that even galvinism had no effect in exciting muscular action in the stage of coma. In addition to their influence on the brain, chloroform and ether now have a local action on the voluntary muscles, paralyzing their irritability.

Finally, the respiratory muscles are paralyzed, and absolute death ensues. The action of the heart, according to the observations of Mr. Wakley, continues two or three minutes after respiration has ceased, and Dr. Percy observed the same phenomenon in the majority of the dogs he destroyed by alcohol; but in four of them, respiration and the heart's action ceased simultaneously. In these cases, the heart, especially its right side, was greatly distended. The heart contracted when the blood was withdrawn.

Dr. Glover injected chloroform into the veins. Respiration and the action of the heart ceased at the same time. The heart was found gorged with clotted blood, and its irritability destroyed. The lungs were congested to a surprising degree, and the bronchi filled with frothy serum.

Dr. Lonsdale poisoned animals by prussic acid. Generally the heart beat some minutes after respiration had ceased: in some instances, the heart's action ceased shortly, owing to the enormous distension of its cavities. On the withdrawal of a little blood, the heart's action was renewed. When he injected the acid into the trachea, the heart's action ceased with respiration, and the right cavities were found to be enormously gorged.

Sir Benjamin Brodie found the heart at rest, and enormously distended, after poisoning an animal by tobacco; on irritating the heart, its action was renewed, and it was kept up for some time by artificial respiration.

I observed the peristaltic action of the intestines still continued in a chloroformized ass after its destruction by pithing.

The stages, then, of the increasing influence of chloroform, ether and alcohol, are:—

Cerebral excitement.

Cerebral derangement; staggering intoxication.

Cerebral sleep (sopor); pupils contracted; dreams; reflex functions of brain and spinal marrow still active.

Cerebral death (coma); reflex functions of medulla and spinal marrow still active.

Death of spinal marrow; cessation of respiration (heart's action still generally present).

Cessation of heart's action.

It is very important to be able to tell easily when the stage of safety sopor is about to merge into that of danger—coma. The action of the pupils is the key to this knowledge. Chloroformization ought not to be continued one instant after the pupils previously contracted have begun to dilate. If unconsciousness can be secured by sopor, the inhalation should not be carried on to produce coma.

If complete muscular relaxation be sought for, as in hernia, to facilitate taxis, in dislocation to make reduction easy, and in tetanus, then it will be needful in general to urge the patient from sopor into coma; but as soon as the muscular relaxation is secured, the inhalation should cease.

When chloroform or ether is employed in chorea, delirium tremens, or other affections, it should never be urged beyond sopor. In Neuralgia it is not usually needful to produce unconsciousness. Whenever the pain disappears the inhalation ought to cease.

Dr. Snow has made this important observation, that the effects of chloroform and ether increase after the administration of it has ceased; this he

calls the cumulative property of those vapors. This increase of effect he has observed to last for twenty seconds. Mr. Wakley, in his experiments, observed the same thing. I observed this effect the other day in a woman whose lip was extensively pared under the influence of chloroform. I gave up the employment during sopor, the pupils being still contracted; and in a few seconds coma supervened, the pupils being permanently dilated.

On this ground, Dr. Snow objects to rapid chloroformization. He conceives that the complete effect ought not to be gained in less than two minutes. I own I cannot see how a slow, but effective administration of the vapor, can lessen the danger arising from the still increasing effect after the administration has ceased. The longer the inhalation is continued, the greater the total amount of chloroform received into the system; and this chloroform, already circulating in the blood, will still, I conceive, under either circumstances of quick or slow inhalation, continue to produce an increased effect. Indeed, in the case in which I observed this action, the inhalation had been carried on with intermission some minutes. In another case, in which unconsciousness was produced quickly, the pupil, which had been dilated during one or two seconds, contracted immediately after the cessation of the inhalation.

I think, with my friend Mr. Fearn, that it is important to dilute the chloroform vapor largely with air during the first few inhalations, so as to avoid the sudden shock on the nerves of the lungs, and accustom them to its presence.

After the death in Newcastle, and after the alarming case at Guy's Hospital, related by Dr. Gull, in which respiration appeared to be suspended for some time, we must feel alive to the proper means for restoring animation should it be suspended.

If natural respiration ceases, there is nothing for it but to establish immediately artificial respiration. Ammonia, cold water, bleeding, will be resorted to in vain.

We ought, then, whenever we administer chloroform, to be ready in case of need to perform artificial respiration. I have constructed a chloroform inhaler, which can be immediately so applied on the face, that, by breathing through the external opening, and pressing back the larynx, artificial respiration can be established. The basis of this inhaler is the mask that I invented for the inhalation of ether, which mask Dr. Snow employed in May last.

"This inhaler is made of copper, brass, or white metal. It has a border or face-piece of thin flexible lead lined with oiled silk, covering the nose and mouth, and from its ductility easily adapted to any face. The lower, or inspiring valve, is constructed on the principle of Arnott's ventilators, having a counterpoise weight which keeps it shut, unless acted on by pressure from without. The upper, or expiring valve, is a plain metallic lid, always closed unless acted on by pressure from within. The tube to which this valve is attached may be drawn out so as to expose an aperture for the admission of air when desired."*

To perform artificial respiration with this inhaler, draw out the expiratory tube; imbed the mask firmly on the face—press back the larynx against the œsophagus and spine—inspire deeply, and distend the chest by blowing through the upper tube. Renew the artificial respirations in rhythmical succession, about sixteen in each minute.

As the action of the heart usually continues after the respiration has ceased, artificial respiration will generally restore animation.

It is possible that the cessation of the heart's action, and of respiration, may be simultaneous, owing to the distension of the right cavities of the heart. In such a case, in addition to artificial respiration, the abstraction of two or three ounces of blood from the jugular may relieve the distention of he heart, and permit the renewal of its action.—*London Medical Gazette.*

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* Pharmaceutical Journal, Feb., 1848.

Treatment of Cerebral Inflammation.—Mr. Solly says, in the treatment of these affections the following principles must be attended to:—1. There is no time to be lost, even minutes are of value. 2. Inflammation of the brain being a depressing disease, general blood-letting is not often admissible. 3. Though this may be attended with benefit at the time, the good derived is seldom permanent. 4. Local blood-letting by leeches and cupping is generally useful, and especially in cases of insomnolescence, arising from abnormal action of the brain. 5. In cases of insanity, where opium has failed to produce sleep, leeches and cold applications generally will; and if they do not, it is strong evidence that the excitement arises from hyperæmia, and not from anæmia, as in that of delirium tremens. 6. Anconite and digitalis are the best sedatives, especially when combined with mercury. 7. When it is advisable to salivate rapidly, raise the cuticle by boiling water, or a similar escharotic, and dress the surface with strong mercurial ointment. 8 Always commence the treatment with a brisk mercurial purgative 9. Soothe the patient's feelings in every way. 10. Never leave anything that is disagreeable to the patient to be done by a nurse or attendant, such as the application of leeches, &c., but persuade him to have them applied. 11. Never lose your patient in the treatment of a chronic case, or try to hasten the cure by increasing the doses. 12. When it is considered necessary to continue the use of mercury for a lengthened period, combine tonics with it.—*Medical Times.*

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MEDICAL SOCIETY OF LONDON.

Naphtha in Consumption.—Dr. T. Thompson made some remarks on the use of naphtha in consumption. He had thought it his duty to ascertain, as far as lay in his power, the effects of this remedy at the Consumptive Hospital. With this view, having taken proper precautions to get the agent pure, and to give it as described by its admirers, he administered it in several cases. The conclusions arrived at by these experiments were as follows: In the third stage of consumption it did positive mischief. In a few cases, when the bronchial tubes were affected, and there was much expectoration, it seemed to arrest the secretion, to some extent, lessen the night perspiration, make the pulse fuller and slower, and somewhat relieve the cough: the appetite also improved. In all the stages of consumption, and under other circumstances in the disease, except those mentioned, the naphtha did positive harm. It had no effect whatever on the tubercular disease.

Dr. Golding Bird declared that there never was a greater delusion than to suppose that naphtha was a remedy for consumption. He had employed it, with all the care and caution recommended by its advocates, and he had never found it of service. The fact was simply this: the pyro-acetic spirit acted in chronic bronchitis just as did other hydro-carbonates, and no better. The tar water of Bishop Berkely had a great reputation in its day, as had also the Barbadoes tar; the fetid gums belonged to the same class, and they all acted as stimulating expectorants to the bronchial membrane. In phthisis, when a cavity was present, much of the cough and expectoration depended on the condition of the bronchial membrane; and hence the origin of the good effects of this vaunted remedy. To say it cured or averted consumption was a mere delusion. All practitioners must have observed that any new remedy, from the confidence excited in the patient, did good for a time, in chronic phthisis. Dr. Bird then showed the fallacious grounds on which naptha had established its temporary fame, and alluded to the singular circumstance that its greatest, and certainly its most scientific advocate, had died of consumption, his favorite remedy having been persevered in to the last.

Mr. Hird detailed the particulars of some cases of phthisis, in which he had been induced to try the effects of the pyro-acetic spirit. In no case did he see any benefit from its use. It must not be supposed, however, that the supporters of naptha employed this remedy solely as extensive counter-irritation over the chest; iron, acetate of lead, and digitalis, were employed at

the same time, so as to make it difficult to determine which remedy really did good or harm.

Mr. A. Fisher related some cases of phthisis in which the remedy seemed to be of much service; but there appeared to be considerable obscurity in the diagnosis, in these instances.

Dr. Willshire had given the remedy in a great number of cases of phthisis. It always did harm, and produced nausea and vertigo after having been administered for a period of a week or ten days. In one case of very doubtful character, it appeared to be of temporary service.

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Effect of Turpentine in Diabetes.—In the absence of any medicine having any immediate or certain influence over diabetes, any remedy which can mitigate and temporarily arrest, if not cure, this malady, must demand attention. A patient of mine, aged 44, of a scrofulous diathesis, has been suffering from diabetes for ten months, during which period the minimum quantity of water passed daily was nearly two gallons. About six weeks since, alarming hæmoptysis appeared, (phthisis having supervened,) to relieve which I administered spirit of turpentine. With the first dose the quantity of water diminished greatly, and after she had taken two or three doses of turpentine the urine was passed in its normal quantity, though not in its normal condition, as I could still obtain sugar by evaporation. I regarded this improvement in the diabetes as a mere coincidence, but on withdrawing the turpentine the water again increased, and that dreadful thirst, which had been absent, returned.

As the quantity of urine passed continued in very large quantity, I again had recourse to turpentine in the form of Chio turpentine. Instantly, as by magic, the quantity of urine decreased, has remained so, and I well know, that were I to omit the turpentine for one day, two gallons and a half of water would be the result. Would it be worth while for pathologists and physicians to direct attention to the absorbent system in this disease? Is the fact of such excessive absorption of the fluids of the body primary or secondary?—*Letter in the Lancet.*

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PATHOLOGY OF THE LIVER.

To show how expedient it is to submit some equivocal-looking livers to either the microscope or other tests, before pronouncing absolutely on any alteration of this kind, I may mention the case of a female, aged 27, who died with phthisis, and whose liver was found to weigh 7lb. 10 oz. It was of an ashy buff color, consistence moderate, but yielding like soft cheese to pressure of the finger; it had little vascularity, but was of a uniform plastic texture. It was at sight declared to be a large fatty liver of some exceptional kind, but the microscope showed no true oil-ovules nor stellar globules, but a mass of little cells and granules. On submitting it, moreover, to boiling and ether, no fat was detected; though on treating a portion with liquor potassæ and hydrochloric acid, an abundance of pure albumen was discovered. It was, therefore, a case of what is called waxy liver,—a true albuminosis, not the result of inflammation, but a vito-chemical deposit.

The mode in which this oil-fat exists normally, and in slightly augmented proportions, is in small ovules in the cells, having a highly refractive power, and these ovules are well depicted by Mr. Bowman, in his plates on this subject. In this normal and primary condition, this deposit seems to consist entirely of what is called *elaine*, which is a liquid oil, till its temperature is reduced to twenty-five degrees; but when the deposit proceeds to any characteristic extent, this liquid oil becomes intermixed with, or holds in solution, a fatty matter of much more consistence, which has a crystalline or stellar appearance under the microscope. This other fatty element does not become fluid till its temperature is raised to 116°, by my trials on several specimens from the liver; and Simon states its melting point at 118°. This modified form of fatty matter is called *margarine* by writers on animal

chemistry, and it exists in combination with *olein* in human fat, and in that of the carnivora; while in the ruminantia, the fat called *stearine*, which only melts at about 144°, resides in this class, in combination with *olein*. The different appearance and consistence between beef or mutton suet and human fat or that of the carnivora, or even the hog, sufficiently declare the specialities of the two kinds, chemically as well as economically.

For the reason, then, that *margarine* constitutes the great bulk of livers that are fatty, I would designate this alteration, as an object in pathology, *margarosis* of the organ; though simple *olein* forms the normal deposit, and may be the solvent medium by which the other principle is conveyed to and deposited in a firmer state in the liver.

There is every reason to think that the relative proportions of these two elements vary in the human liver, giving more or less firmness or softness to the affected organ, both during life and after death; but as far as any consistence exists, where this fatty alteration is of any prominency, it is entirely owing to the firmer material, and therefore the alteration may be appropriately styled a *margarosis*.

In the primary stage of this alteration the oil-ovules seem confined to the hepatic cells, but as it advances, they may be observed in the interlobular tissues, while the *margarine* seems to be deposited in masses of round or stellar globules, which encroach upon and usurp the interlobular spaces—the tissues becoming atrophied, and, consequently, the biliary apparatus and function restricted and diminished. Two most important questions about this alteration remain to be shortly considered, and these relate to its physiological causes and pathological effects.

These questions, I am sorry to say, have not advanced further than hypothetical solution. Andral supposed that a sufficient quantity of hydrogen ceases, in phthisis, to be eliminated from the bronchial membrane in the form of aqueous vapor, and hence it is separated in excess from the blood in the liver, and so produces a deposit of fatty matter in that organ.

Liebig's hypothesis, as is well known, is nearly allied to this, only he makes the carbon to be the accumulated and metamorphosed element, and to be deposited in the liver—it becoming increased in amount in the blood from its insufficient oxidation in the lungs in cases of phthisis, in which disease the vito-chemical action of these organs is either long or seriously restricted or impaired. Others again have attributed the accumulation of fat in the liver, in the wasting varieties of phthisis, to the absorption of oil-fat from the other textures and organs of the body, and to its being currently precipitated on the liver, owing to the portal capillaries being relatively of so small a calibre as to arrest the fat-ovules; while some have referred this fatty accumulation to an undetermined catalysis of the liver itself.—*J. Black, in Provincial Med. and Surg. Journal.*

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Epidemic Influenza in England—Registrar General's Quarterly Report.—The fourth return for the quarter ending Dec. 31, 1847, of the mortality in 117 districts of England, has just been issued by the Registrar-General, and is a document more than usually interesting to the medical profession. Within the last few months Europe has been visited by a severe epidemic, and our own metropolis has especially felt its virulence.

Towards the latter end of November, after some singular atmospherical vicissitudes, the influenza commenced its ravages, and carried off in the course of six weeks 11,339 persons. During the whole period the epidemic lasted, 5000 individuals died over and above the average mortality of the season. The greatest intensity was manifested in the second week of its course; raged with nearly equal violence through the third week; declined in the fourth, and then partly subsided; but, the temperature falling, the mortality remained high, not only through December, but through the month of January.

Those upon whom the disease appeared to exercise the most powerful influence were adults and the aged; in the three weeks of the epidemic

ending Dec. 18, the deaths under the age of 15 were 2846. In the same two periods the deaths at the ages 15 to 60 were 969 and 1970; at the age of 60 and upwards, 576 and 1999. The mortality in childhood was raised 83 per cent., in manhood 104 per cent., in old age 247 per cent. From the age of 4 to 25, however, the mortality was comparatively not very much increased; at the age of 10 to 15, the healthiest period of life, it was scarcely increased at all—in girls.

It appears from the returns that not only were those enfeebled by previous disease subject to the attack of influenza, but also those of healthy and robust constitutions; these latter, however, from the energy of the vital force, were enabled to resist more effectually the epidemic, while the former more easily succumbed. The poison seemed to pervade the whole system, but affected chiefly the mucous membrane lining the sinuses of the face and head, and the air-tubes of the lungs. Hence those subject to asthmatic paroxysms died, when attacked, in considerable numbers; the deaths ascribed to asthma in October and November were 12 weekly; in the six weeks of the influenza epidemic, 77, 86, 78, 52, 14, 26, besides the numerous cases classed under influenza. The deaths ascribed to bronchitis in the week ending October 30 were 36, and in the nine following weeks, 49, 58, 61, 196, 343, 299, 234, 107, and 138. The deaths ascribed to pneumonia during this time were, 62, 68, 79, 95, 170, 306, 294, 189, 131, and 148. In some of these cases the inflammation specified was the primary disease, in others secondary, and in many it was influenza—misreported. The Registrar-General remarks from these circumstances, that "there is a strong disposition among some English practitioners, not only to localize disease, but to see nothing but a local disease; hence, although it is certain that the high mortality on record was the immediate result of the epidemic influenza, the deaths referred to that cause are only 1157; viz., in the first week of November 2, and in the eight weeks following, 4, 4, 36, 198, 374, 270, 142, 127; and these include nearly all the cases in which influenza was returned, whether as primary or secondary, in conjunction with other diseases. A similar defect has hitherto been found in the returns of all great epidemics: in 1665, the great plague year, 97,306 burials were returned in the London bills of mortality, only 68,596 of which were ascribed to plague. Influenza attacked persons laboring under zymotic diseases: thus the deaths from hooping-cough rose from 12 and 25, to 65 and 71 during the epidemic; the deaths from measles rose from 43 to 96, 89, 69, 75, during the first four weeks of the epidemic, and then subsided to 37 and 58. Typhus, which had been fatal to 70 and 80 weekly, rose to 132, 136, and 131, in the second, third, and fourth week of the influenza epidemic, and then fell to 83 and 74. Although influenza is not mentioned in these cases, it is in others, and there can be little doubt that two or more zymotic processes do often go on simultaneously in the blood and body; a fact of profound interest to the pathologist, and worthy of attentive investigation."

The epidemic, as might be expected, proved more severe in some parts of London than in others; thus its fatality in Lewisham and St. George's-in-the-East was as 1 to 4. This latter district is one of the most unhealthy in the metropolis, in consequence of the filth and wretchedness in which the poor are compelled to pass their lives. In many parts there is no drainage whatever, and sometimes the lower parts of the houses are flooded with water, which, when it recedes, leaves a disgusting accumulation of organic matters in a state of decomposition. Under certain conditions of the atmosphere these, undergoing transformation, produce disease.

The meteorological phenomena were particularly remarkable prior to the breaking out of the influenza. The wind, from the first week in October, had been blowing S.S.W. and S.W.; the weather was very warm; a brilliant aurora was seen, and shook the magnets on the 24th of last month; it appeared eight times during the quarter. On the 16th of November there was a remarkable gloom; the wind changed to N.W., and amidst various changes, still blew from the north over Greenwich at the rate of 160 and 250 miles a day. The mean temperature suddenly fell from 11° above to

10° below the average. On Monday it was 54°; Friday 32°; the air on Friday night 27°; the wind was calm three days, and on Saturday a dense fog prevailed over the metropolis for five hours. No electricity was perceptible during the week. On Sunday, clouds and damp prevailed, the wind changed in the night to S.E. by E., and passed four days over Greenwich at the rate of 200 to 300 miles daily; the temperature suddenly rose, and remained from 2° to 9° above the average through the week ending November 27, when the influenza became epidemic. Extreme cold never increases the weekly mortality in London above 1500; extreme heat still less; intermediate changes slightly. The Novemoer fogs do not give rise to influenza.

The reports received from the provincial registrars show that the epidemic prevailed in most places at somewhat later periods than in London, and that it put on a milder character. At Edinburgh, Dr. Stark states that it suddenly made its appearance, attacking large numbers of the inhabitants, twice during the month of November, on the 18th and 28. On the last occasion severe frost prevailed, with a damp atmosphere and thick fog, which supervened after a few days of very cold weather. The mean temperature of the city was in December, 39°; the highest 57°, the lowest 21°.

In Paris it appeared about the 4th of December, affecting nearly half the population. At Madrid 5000 of the inhabitants were laid up on the 11th of January. The Registrar-General has been furnished by Sir William Burnett with returns of the epidemic on foreign stations, by which it appears that in January and February, 1847, it prevailed on the coast of Portugal and south-east of Spain; January, February, and March, in Newfoundland and New-Zealand; February and March at Valparaiso; April, coast of Syria, July, August, and September, west coast of Africa, south of the equator; August, Hong Kong.

An interesting account is given of the different influenza epidemics which have prevailed in England. The years marked by these visitations were 1728, 1733, 1743, 1758, 1762, 1767, 1775, 1782, 1788, 1803, 1831, 1833, 1837, and 1846–7.

There can be little doubt that, by the carrying out of efficient sanitary measures, the fatality of epidemics in London and other large cities may, to a great extent, be prevented. The Registrar-General warmly espouses this doctrine, and laments that the efforts of her Majesty's Government to introduce such measures were, during the last session of Parliament, strenuously opposed. We look anxiously, but hopefully, to the future. There is a prospect of the abolition of cesspools, the better construction of sewers, and the building of more convenient dwellings for the poor. Sanitary reform, however, cannot be perfect till the tax on light and ventilation be abolished. If ministers should refuse this, after all they have said and done on behalf of public hygiene, their conduct will be thoroughly inconsistent with their protestations, and they will be universally considered the greatest enemies of the cause they advocate.—*Med. Times*, Feb. 19, 1848.

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The Influenza.—This epidemic, after having traversed Northern Europe, has now extended its ravages to Algiers and the northern coast of Africa, as also to Athens and other parts of Greece.—*Med. News.*

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SURGERY.

Luxation of the transverse apophysis of the fourth Cervical Vertebra reduced on the seventh day: with some considerations on the luxations of the Vertebræ in general.

BY DR. SCHRAUTH.

Case.—J. St. B. de B., aged 25, a weaver, was seized on the night of the 26th of February, 1843, by two vigorous men, who wished to throw him out of the door. B., suspended in the air by his two adversaries, put his hands on the jambs of the door; then one of them taking him by the head and neck, and the other by the trunk, they threw him against the wall of the landing

place. B. on getting up, immediately complained of a severe pain in the neck, saying:—"They must have torn a piece of flesh from my neck," and could no longer stir his head. A barber, who was consulted the next day, rubbed it with an ointment; but as the stiffness remained the same, and the pain increased, B. went, on the 28th of November, to Dr. T., the distance of a league. To relieve the pain in the neck, he ordered repose, abstinence, bleeding, leeching, cold fomentations, and a saline purgative. In spite of the prohibition of the doctor, the patient returned on foot, although on his arrival he was worn out with fatigue, on the point of fainting, and covered with a cold sweat. Dr. T. went on the following day to the patient, and continued the antiphlogistic treatment; but as the state of the patient was still the same, on the 2d of December made his report to the authorities. The author of this memoir, on the 3d, found the patient lying on the bed, his head turned to the left; he was hoarse, spoke with difficulty, was sensible, and complained of a pain in the nape, and a swelling in the left arm; of a middle size; of a phthisical habit; the muscles flaccid and soft; the neck long and thin; face pale; eyes haggard; the head immovable like a statue, turned to the left, and a little bent forward. He could incline the head a little forward, but every other movement was impossible; the larynx was not too prominent, during deglutition, which was easy in other respects: he experienced a sense of swelling in the pharynx. Examined from behind, the head and shoulders were bent forward a little, the shoulder blades projecting, and the vertebral column much sunken, and a little turned to the left. When the arms were stretched upwards and forward, the vertebral column appeared straight, with the exception of the neck, which was bent to the left and forwards.

On pressing on the shoulders the patient felt a severe pain from the sixth to the second cervical vertebra, and a less severe one from the third to the eighth dorsal vertebra; but this latter, he says, came on later, and is propagated from above downwards. Slight tumefaction and echymosis of the skin caused by leech-bites, covering the third, fourth, and fifth dorsal vertebra. The spinous apophyses of the dorsal vertebræ were arranged in a normal right line; but the spinous process of the fourth cervical vertebra was a little turned to the right and sunk—that is to say, pushed forward. As the patient was very thin, the transverse processes of the cervical vertebræ could distinctly be felt; the fourth was painful, and projecting to the right. The neck was visibly a little bent to the right. No unusual tension of the muscles of the neck; no symptoms of spinal irritation; pulse hard and quick; no appetite; great weakness.

Diagnosis.—Luxation of the fourth vertebra on the fifth in the articulation of their right transverse apophyses, with rupture of the ligaments of that articulation; of stiffness of the neck without lesions of the spinal marrow.

Prognosis.—Very unfavorable; for if the patient were abandoned, then would come on either inflammation, paralysis, marasmus, or at best, a permanent stiffness of the neck, and on attempting reduction, he would run the risk of the greatest danger. Notwithstanding, reduction was decided upon, which was performed with the greatest caution. An assistant pressed on the shoulders of the patient, who was seated in a chair; another pulled the head upwards, whilst M. Schrauth applied his thumb under the right side of the neck, pushed the projecting part backwards and upwards. The patient felt his pains diminish during the traction exercised on the head.

Encouraged by the first result, the patient was made to sit on the ground, two strong cravats passed under his chin, and knotted separately at each side above the ears, were confided to two assistants; another cravat applied to the nape, and twisted in front of the forehead, was given to a third assistant. These three men drew the head directly upwards; a fourth assistant, seated behind the patient, seizing his trunk and shoulders, made counter-extension by leaning with all his weight. Dr. T. was charged with pushing onwards and backwards the right transverse apophysis which projected, and then M. Scrauth, seizing the head with his hands, directed the movements.

The patient held M. Schrauth with his right hand to warn him when he ought to stop the tractions; the stronger they were, the more ease they produced. Whilst they continued thus pulling gently and prudently, they made slight movements forwards and backwards, to the right and left; then they gave the neck a slight turn on its axis. During these manœuvres, which were frequently interrupted, various distinct cracklings in the neck were heard; these movements became easier by degrees without being followed by accidents. The patient then held his neck straight without pain. After someinstants of repose, M. Schrauth seized, without employing much force, the head between his hands, the body being sustained, and repeated the movements so easily that the patient himself soon executed them alone. He could lower the chin as far as the chest, raise the face to see a nail in the ceiling, and turn the head from side to side, so as to see his shoulders. The sinking of the spinous apophysis, and the projection of the transverse apophysis of the fourth vertebra, had disappeared. The success of the reduction appeared proved. B. was put to bed without bandaging; they prescribed glauber salts with nitre, a large bleeding, twenty leeches, and cold fomentations on the neck and upper part of the back.

December 4th. Pains in the neck and back; diminution of the swelling of the left arm; sleeplessness; little thirst; pulse quick.

5th. The pains less; slept for three hours; complete cessation of the swelling; the lymphatic glands of the neck and armpit swelled; pulse soft and slower.

6th. Swelling of the glands more pronounced; the cold compresses replaced by warm applications.

After some days of repose, the patient could resume his occupation without stiffness in the movements of the neck.

The details of this interesting observation appears to us sufficient to prove the truth of the diagnosis of this luxation, which could neither be confounded with a fracture nor with a severe contusion, and we do not think it necessary to follow the author in his long anatomical and physiological dissertation on the part engaged.

On the occasion of this observation, M. Schrauth made bibliographic researches which brought to his knowledge twenty-six other cases of luxations of the cervical vertebræ with his own twenty-seven. In this number, three times death immediately followed the accident; in seven cases, they sank afterwards without reduction being attempted; in three cases the consequences of the accident are not stated; three times there was a cure without reduction of the vertebræ, but the movements of the neck remained confined; in eleven reductions, nine were made with success, and two were followed by death.

Seat.—The luxation took place—

Three	times between	1st	and the	2d	cervical vertebra.
Twice	"	2d	"	3d	"
Five times	"	4th	"	5th	"
Twice	"	5th	"	6th	"
Twice	"	6th			
Once	"	7th			

In the other cases teh seat was not stated.

Direction.—It was four times forwards, twice backwards, six times to the sides; fifteen times it was not recorded.

In the nine individuals (two with paralysis and loss of sensation) with whom the reduction was followed by success, the luxation was twice forwards, once backwards, and four times sideways; and in two cases it is not stated.

The tables speak in favor of the reduction, the more so, as in many of the patients with whom it was neglected, either death supervened afterwards, or life was rendered hopeless by the consecutive accidents.—*Archiv. for Physiologische Heilkunde.*

A new and easy method of applying a Ligature to Uterine Polypi. By W. S. Oke, M. D., *Southampton.*—As it is generally admitted that ligature is the safest method of removing polypous growths from the uterus, the remarks of Dr. Oke, which are made with the object of facilitating the operation, frequently a troublesome one, will be considered as worthy of acceptation. After describing the instruments in most common use, as the double canula, Levret's instrument, and those of Nissen, Sir Charles Clarke, and Dr. Gooch, he proposes the following modifications.

The instruments are to consist of three metal tubes, two of which are to be of the length, shape, and size of a No. 8 male catheter, except that their sides are to be flattened, and that there be no rings at their lower ends. The curved extremities are to be rounded, each having an orifice in the centre, with smooth edges, and large enough to admit a strong ligature. The third is a stouter tube of the same diameter, eight inches in length, and straight to within an inch of its upper end, which is to be slightly bent and bulbed. A short transverse bar is to cross its lower end, at about an inch from the extremity.

Position of the patient.—Nothing conduces more to the facile use of instruments than a proper position of the patient. She is to be placed on her left side upon a mattress, with her trunk lying transversely across the long diameter of the bedstead, and her ischia upon its edge; the femora are to be well flexed, and the knees half bent and kept separate by a pad or small pillow.

Mode of application.—The two curved canulæ, containing a well-oiled ligature, and exactly fitted together at their flat sides, are to be introduced into the vagina, with the concave surface to the pubes, their curved ends being directed to the anterior part of the stem of the polypus by the fore-finger of the left hand. An assistant takes charge of the left tube, and the ligature being reflected and held between his finger and the canula, he keeps the instrument fixed in its position by pressing it steadily against the arch of the pubes. The right canula, with the ligature lying loose in the tube, is carried round the stem of the polypus, and brought again into position under the arch of the pubes at the *left* side of its fellow. The canulæ are now to be cautiously withdrawn, by depressing their handles towards the abdomen, and as their points are quitting the vagina, the ligature is to be caught between the finger and thumb, and held tense till the canulæ are completely clear of it; it is then, by means of a hooked wire, to be drawn through the third tube at its bulb end, which it guides to the root of the polypus. Having ascertained that no part of the os uteri is included within the noose, and the bulb of the tube being turned to the polypus, the ligature is tightened and secured upon the cross at the foot of the instrument.

The advantages of this method of tying uterine polypi are, First, that it establishes a fixed point for the ligature, close to the os uteri, and which was scarcely attainable by any former method on account of the unsteadiness and mucosity of the surface of the polypus. Second, the length and curve of the canulæ, by which the ligature can readily be slipped round the root of the polypus by the second canula, from the fixed point established by the first. Third, the curves of the canulæ taking the course of the pelvic outlet, gives a freedom to the operation, of which, by the means hitherto employed, it has been comparatively deprived. And, lastly, there is also an advantage in the bend and bulb of the third tube; the former allows a direct action to the ligature, the latter prevents in great measure, all danger of the uterus or vagina being injured by any incautious movement of the patient.—*Ranking's Abstract of the Medical Sciences.*

SURGICAL SOCIETY OF IRELAND.

EXTERNAL DIRECT INGUINAL HERNIA.

(Communicated to the Surgical Society of Ireland, Jan. 22.)

Dr. Croker King regretted that he could not exhibit to the society the recent specimen which originated the communication he was about to make. He must trust to one or two drawings in order to illustrate the case.

The form of hernia to which Dr. King was about to draw the attention of the society was generally regarded as a rare or uncommon variety of that disease, but Dr. King observed that he had no doubt that this peculiar description of hernia was of more frequent occurrence than we are at present prepared to admit: he alluded to hernia where the neck of the sac was situated between the epigastric and obliterated hypogastric arteries, and named by authors the superior or external direct inguinal hernia, in contradistinction to the usual form of direct hernia, where the neck of the sac had for its external relation the hypogastric artery, which cord in the case under consideration lay internal to it.

The external appearance of the tumor in this case had all the features of an oblique hernia; it was pyriform, its direction was upwards and outwards, and pressure on it distended the spermatic canal. On dissection. the cremaster was found expanded over the tumor, and this circumstance was an additional inducement to regard the case as a hernia by oblique decent; but the cord was situated on its anterior and external aspect. The society should bear in mind that in form, direction, and coverings, this hernia actually resembled one by oblique descent; the only external circumstance in which it differed was the situation of the cord, and on this circumstance alone Dr. King founded a diagnosis, which was fully confirmed by dissection. Dr. King observed that he was well aware that surgical writers had stated that *occasionally*, but rarely, the cord is situated on the anterior and external aspect of the tumor, in cases of hernia by the oblique descent; but from anatomical considerations, which it would be out of place here to enter into, he was strongly inclined to the opinion that the cases of supposed oblique hernia, in which the cord occupied this unusual position, would, if accurately dissected, have been found to be similar to the case he now detailed.

The principal object he had in bringing this case under the consideration of the society was, that the matter should be followed up, and that whenever an opportunity occurred that the relation of the epigastric artery should be accurately determined in cases of suspected oblique hernia, where the cord lay on the external and anterior aspect of that part of the tumor *situated near to the external abdominal ring*.

Dr. King further observed, that if it was desirable to form a correct diagnosis between direct and oblique linguinal hernia in ordinary cases, surely the one under consideration had additional claims to attention, as from the external position of the neck of the sac, it was brought into more immediate relation with the epigastric artery, than in the usual form of direct hernia, where the protrusion was situated much more internally; in fact, had this individual been the subject of an operation to relieve strangulation at the neck of the sac, if the incision had been carried upwards and outwards, the epigastric artery would *inevitably* have been wounded; or even if the precautionary measure (adopted in doubtful cases by all, in every case by some) of cutting directly upwards was resorted to, the vessel would with *equal certainty* have been divided, as the epigastric artery was found, on dissection, in *close contact* not only with the external but also with the *superior* surface of the neck of the sac.

For the reasons already stated, and from the result of the examination of the case now under the consideration of the society, Dr. King thought that there was sufficient evidence adduced for the exercise of great caution in the division of a stricture at the mouth of the hernial sac, in a case of supposed oblique hernia, where the cord is situated anteriorly or externally.

Dr. King considers that if the views now advanced should be corroborated by future examinations, that we would then have arrived at a point of diagnosis of the greatest value—namely, the determination of the position of a vessel, which, if divided, would bring the life of the patient into imminent danger, and which accident would be almost certain to occur if this form of hernia (the superior or external direct) were confounded with a hernia by the oblique descent.—*Dublin Medical Press.*

MIDWIFERY.

The natural term of Pregnancy.—Most accoucheurs admit that parturition takes place when the infant has reached 270 or 280 days. According to M. Leray, it is not from this circumstance that the duration of pregnancy ought to be reckoned. It would be wrong to attribute that to the number of days which are necessary for the infant to have been in being, or to its bulk, or to the energy of its movements. To arrive at the truth, it is necessary to refer it to the same instinctive and innate cause which every month, at nearly the same period, brings about an engorgement of the uterine vessels, and with it excites the uterus to expel the discharge.

Upon this presumption, M. Leray came to the belief, that the greatest number of accouchements take place at a constant period, which is that of the tenth menstruation, reckoning from the day of the month when the last took place; and in fact, that physician has found the rule confirmed by the observation of seventy-eight confinements, in which he had taken care to mark the last menstrual period.

The determination of this interesting point is not merely a matter of curiosity, but has the importance of a law constantly applicable in practice. Thus, when it is determined to bring about premature delivery, it is less important to ascertain whether the infant is in its seventh or eighth month, (since after the seventh month it is always viable,) than to judge rightly whether Nature be disposed to second the operation; in other words, whether uterine contractions will actually come on, to rouse and to aid in the untimely labor which is required of her. But if, as M. Leray seems to have determined, the term of delivery and that of abortions are determined by Nature, the day for operating is no longer at the choice of the operator—it is dictated to him by Nature, and his duty is to act according to her intimations.

We will now give the conclusions at which M. Leray has arrived, which are—

1. The time of natural, as well as of premature delivery, is directly referable to menstrual periods.

2. The return of these periods, throughout the course of pregnancy, is in relation to the date of the month corresponding to that of the day when the menses began, at their last occurrence, to appear, whatever may be the number of days reckoned in each month.

3. The premonitory signs of labor at full term, and of premature delivery, occur, in the greater number of women, on the day of the month pointed out, or during the seven following days.

4. Nevertheless, the commencement of the expulsive pains may date, in a normal manner, but much less frequently, from the fifteenth day of the tenth month.

5. Every delivery at full term, or premature, which is accomplished before the right period of the month, may be considered as being in advance.

6. Every accouchement which is effected after the seventh day of the same period may be considered as delayed.

7. The preöcurrence of labor is much less common than its delay, and most frequently they do not precede the due time more than five days.

8. Delays, on the other hand, have not such limitations.

9. Lastly, in either case, the causes of advance or delay are very appreciable, although there are cases which it is impossible to fix with certainty.—*Lancet.*

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Premature Puberty.—A short time since I had a little patient, aged three years, and when I was prescribing for her, the mother hinted to me the necessity there was not to administer violent medicine, as the little child was "poorly." I found, on inquiry, that for twelve months this child had been regularly menstruating; and with the permission of the mother I stripped off the clothes, to observe the external organization of my patient.

The mammæ were as healthily developed as in an adult of twenty years; the nates were also developed, the pubes having a slight flush of hair upon

them; the labiæ, &c., as in a matured young person; the hymen was perfect, and the vagina anteriorly was of a large size. The countenance was antique, and altogether this babe of three years had the appearance and gait of a little old woman.

I observed the child for a few months; she menstruated regularly, and suffered all the concomitant uterine, lumbar, and other divers aches and pains, as is usual in those who perform this function, as evidencing a capability of uterogestation.—*Mr. Embling in the Lancet.*

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MATERIA MEDICA.

Case of Poisoning by Chloroform—Conflicting Medical Opinions.—The case of Hannah Greener, alleged to have died from the effects of chloroform vapour, has already given rise to considerable difference of opinion; an illustration of what has been often before observed—namely, that in cases which attract great public notice, medical men rarely agree about the cause of death. In the first place, it is alleged that the patient was not in a fit state for the administration of the vapor. We cannot discover, in the various reports, any sufficient ground for this allegation. One witness deposed that deceased said she would not have her nail taken off without being rendered insensible. She manifested no unwillingness to take the vapor, but appeared to dread the operation. These are circumstances which we apprehend have existed in some hundreds of cases where ether and chloroform have been exhibited, without deterring the surgeon from operating, and without leading to serious results. Secondly, we have the fatal result referred to idiosyncrasy, but the letter which we inserted from Mr. Potter shows that this girl bore a full dose of ether without suffering from any ill effects; and it is hardly probable that in two narcotic vapors, so analogous in their operation, there would be an idiosyncracy to one and not to the other. A communication from Dr. Snow, appears to us to dispose of this view of the case, and we quite agree with him in thinking that, if idiosyncrasy were admitted as a sufficient explanation of the lamentable result, the confidence of the public in the safe use of chloroform vapor would be justly destroyed; for how is it possible, with the facts proved in Greener's case, to determine *à priori* when this fatal idiosyncrasy is present or absent? Dr. Simpson, on the other hand, considers that the patient died from asphyxia—in fact, that she was suffocated by the attempts to revive her; and that, had nothing been done, she would have recovered. He has, therefore, come to the conclusion, that the girl really died from the *nimia cura medicinæ: i. e.*, that she was actually choked by the means intended to restore life. This involves the question of treatment in cases in which chloroform produces such alarming effects. Dr. Simpson advises merely the sprinkling of cold water on the face, and artificial respiration. Dr. Glover, who was the first to experiment on animals with chloroform, and who has given much attention to the subject of poisoning, expressed a strong opinion at the inquest, that the after-treatment employed by Dr. Meggison for the recovery of the deceased, especially in reference to the attempt at bleeding from the arm and the jugular vein, was very proper, and in accordance with the practice of the highest authorities. Artificial respiration is recommended by Mr. Sibson, and might, had there been time, have been used in conjunction with other means on this occasion. We must remember, however, that according to Dr. Meggison's statement, the whole process of inhalation, operation, venæsection and death, did not occupy more than two minutes. We cannot adopt the view that the deceased died from asphyxia, produced by the treatment pursued. Whether bleeding be or be not a proper mode of treatment, the evidence establishes that the patient was dead before the veins were opened No blood flowed; hence, so far as this part of the treatment is concerned, it is the same as if bleeding had not been attempted. To other parts no objection can be made, *e. g.*, the throwing aside the cloth with the vapor, and dashing cold water on the face. In fact, to believe that the deceased was asphyxiated, it is necessary to suppose that a mouthful of cold water, followed by brandy, "a little of which was swal-

lowed," found its way into the air passages, and prevented her from respiring. This view appears to us to be quite inconsistent with the facts. A mouthful of cold water and brandy, thus administered, would not, we believe, cause asphyxia; and had it so operated in this case, brandy and water would have been discovered in the air tubes on inspection. The plain and undeniable inference appears to us to be, *that the deceased was poisoned by chloroform vapor.* It is of no use attempting to place the facts before the public in any other shape. The post mortem appearances coincide with what might have been expected from those met with by Dr. Glover, in 1842, in his experiments on animals poisoned by chloroform. We have already assigned reasons why we do not think that idiosyncrasy had any necessary connection with the fatal result. It bears out the view expressed by Dr. Simpson, in a paper lately published, to the effect that if chloroform be exhibited in too strong a dose, and given uninterruptedly for too great a length of time, it will produce serious consequences, and even death. We agree with Dr. Snow, in thinking that the vapor was probably here given in too concentrated a form, and too rapidly; and that it thus destroyed life. This appears to us to be the only reasonable explanation of the facts.—*London Medical Journal.*

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Death of a Boy from Chloroform.—The following instance of death from the improper use of chloroform occurred at Aberdeen on the 8th inst. A lad about 17 years of age, an apprentice to a druggist in the town, has been in the habit of inhaling chloroform almost daily for some time, for the sake of the excitement and pleasurable feelings he experienced from its use. He was observed "staggering about the shop all the morning" as if intoxicated, which was attributed to frequent inhalations of small quantities of chloroform by his companions—but this is not certain. About noon to-day, while there was no person in the shop with him but a boy about 12 years of age, he poured a considerable quantity on a towel and applied it to his face. At this time he was standing by the counter and leaning towards it, so that when insensibility was produced he appears to have fallen forward with his face on the towel with the chloroform. The boy who was with him in the shop at the time, says that he remained in this position for about ten minutes, he being afraid to disturb him, as he always became very violent when any person touched him while he was under the influence of chloroform on former occasions. When raised, he was found apparently lifeless, and medical men were sent for in various directions. In about five minutes, (fifteen minutes after he began to inhale the chloroform,) Dr. Jamieson saw him, and found him pulseless—the doctor not being able either to feel or hear the beating of the heart—but the surface quite warm, and the lips very livid. On opening a vein in the arm, a few drops of blood only escaped. Dr. J. immediately introduced a pipe into the trachea from the mouth, and kept up the respiration for 15 or 20 minutes, without being able to perceive the slightest signs of life. Besides these means, the application of strong liquor ammonia to the nostrils, &c., were had recourse to. Dr. Keith arriving almost immediately after Dr. J. had desisted from the use of the artificial respiration, it was deemed advisable to keep it up still longer. An opening was consequently made into the windpipe through which a tube was introduced, and in this way the inflation of the lungs was kept up for more than an hour without the slightest effect. Four or five medical men having arrived soon after Dr. Keith, all assisted in keeping up the respiration, and every other suggestion which was likely to be useful under the circumstances was attended to without effect. After the most careful inquiries of an intelligent young man belonging to the same shop, and who saw the chloroform bottle shortly before 12 o'clock, but who was not present at the time of its fatal inhalation, it appears that the quantity poured on the towel "could not have exceeded 3 drs. or ½oz." I suspect no great faith can be placed on this, however, although the person affirms that "he hardly missed it from the bottle." The bottle is large, having a diameter of about four inches. It appears that the de-

ceased was in the habit of inhaling the chloroform so frequently that the bottle had to be hid, but that he discovered it this morning. The liquid appears to be less pure than that manufactured in Edinburgh.—*Scotsman.*

Two views may be taken of the cause of death in this instance: 1—either that the deceased died from an overdose of chloroform vapor, or 2—that being stupified by the vapor, he fell forward on the cloth, and was asphyxiated, in consequence of the cloth preventing respiration. In our opinion it appears more probable that he was poisoned by chloroform vapor, which he must have breathed until respiration ceased. Dr. Jamieson, to whom we are indebted for an account of the case, has promised to send us a report of the post-mortem examination.—*Med. Gaz.*

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ON MURIATE OF OPIUM.

BY J. G. NICHOL, M. D., OF CROOK, DURHAM.

During the last ten or twelve years I have made and prescribed a solution of opium, which I think is not mentioned in any work on materia medica with which I am acquainted. I use powdered Turkey opium and water, pretty strongly acidulated with muriatic acid. I have found, by experience, that this is the best anodyne I am acquainted with. I see, by Dr. Pereira's Materia Medica, that mention is made of Dr. Porter's solution of opium in citric acid. I made and used the same sort of preparation, ten years ago; but it did not answer; it caused a great deal of headache and other unpleasant symptoms; moreover, it became muddy, and appeared to be decomposed; therefore I gave up using it. I have called this preparation of mine "Muriate of Opium," but perhaps it is not a very correct name. I may mention that I prepared solutions of opium with acetic, nitric, sulphuric, citric, tartaric, and muriatic acids, and also prescribed them, but the muriatic solution was vastly superior to any one in every respect. All of them produced *headache*, with the exception of the *muriatic*. I prefer muriate of opium to the tincture, wine, or powder, of opium, and also the muriate and acetate of morphia; in fact, to any other preparation of opium. It never makes my head ache, but all the other preparations do.

My preparation is made according to the following formula:

Take of the best powdered opium, ℥j.
Muriatic acid, ℥j.
Distilled water, ℥xx. Mix.

Shake this mixture very frequently every day, during fourteen days, then strain and filter. The dose is from twenty to forty drops, according to circumstances. Many of my medical friends have tried this preparation, and they highly approve of it. I have taken the liberty of sending you a small quantity as a specimen.—*Pharm. Jour.*

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MISCELLANEOUS.

Curious Fact of Natural History.—M. Dumeril, at a late meeting of the Institute, reported upon a memoir of M. Boursier, referring to the singular fact of the silk worms' eggs, which were not fecundated, and still were fertile. M. Duméril observed that this was not an isolated or even uncommon circumstance; he had remarked that the females of insects of very different kinds but particularly amongst the nocturnal lepidopteræ, produced occasionally fertile eggs soon after breaking through their crysalis. The insect of this species found in summer upon plants are all females and fecundated; it is only in autumn that the males appear. They couple, and the females bring forth eggs which produce in spring female individuals, who do not require to be fecundated to be fruitful. This may continue for several generations, even as far as ten successive births of female individuals, without fecundation.—*Med. Times, Nov.* 20, 1847.

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Faculty of Medicine of Paris.—Professor Orfila, Dean of the Faculty of Medicine of Paris, has been removed from his office by the Provisional Government, and Professor Bouillaud appointed in his place.

On the Influence of the Penitentiary System upon the production of Insanity.—M. Collineau read to the Academy of Medicine, in January last, a paper by M. Joret, Physician of the Prison of Vannes, treating of the influence of the penitentiary system upon the production of insanity.

The prison of Vannes was very salubrious and well situated; it contained, on the average, 318 female prisoners, sleeping in nine wards, taking their meals in one refectory, and assembled in one work-room at needle-work, knitting, and picking oakum. The food was wholesome, and sufficiently abundant. The prisoners were strictly enjoined to preserve, day and night, absolute silence; it was the rule of Aubrun, less the solitary confinement. The punishment was the same, with the exception of corporeal chastisement, which had been abandoned. Each day the prisoners had two recreations, each of half an hour, during which they were permitted to walk in silence one by one. Two things, therefore, deserved notice; first, the absolute privation of intellectual communication between the prisoners; and, secondly, insufficient bodily exercise. Since the prison had been opened from June 20th, 1842, up to June 20th, 1845, 872 persons had been admitted; of whom 414 had been liberated, nineteen had been pardoned, twenty-five had become insane, eight had been placed in other houses of correction, and eighty-one had died. Thus, upwards of eighty deaths had been recorded, and every year an average of eight cases of insanity had been observed, out of a population of little more than 300 adult prisoners.

After enumerating the predisposing causes of insanity, a bad education, worse examples, a profligate life, and also "hereditary," M. Joret considered as determining causes the absolute silence enjoined in the prison, the grief of the prisoners increased by this rule, and the absence of proper exercise. M. Joret forwarded thirty cases of insanity, classed according to their determining causes. The first division, comprising mental aberration, attributed to the rule of absolute silence, contained six cases of mania and eight of monomania. The second division, viz., insanity produced by violent sorrow, increased by this rule, contained two cases of maniac delirium, one of mania, and seven of monomania. The last division, insanity from want of exercise, presented one case of acute mania, and six of monomania. Of the entire number, eight patients only had been cured. From these cases, M. Joret thought himself authorized to conclude that the penitentiary system at present adopted in the prison of Vannes, causes insanity; and, from statistical researches, he arrived at the conclusion that the system of cellular imprisonment (solitary confinement) was far from giving such a large number of cases of madness.

The reporter, adopting to a certain extent the opinions of M. Joret, did not think that the time was yet arrived when any decided judgment could be formed between the two rival systems.

M. Nacquart thought these conclusions were too exclusive; what he had seen in the London penitentiaries could not permit him to adopt them.

M. Ferrus gave some explanations on the system adopted in French penitentiaries; it was the rule of Aubrun—that is, silence and labor in common during the day, and solitary confinement at night. The number of the inmates was, however, an obstacle to this second part of the rule, and they were placed in common sleeping-rooms. The beds were not sufficiently distant, and the temptation to communicate with each other became almost irresistible: hence severe punishment, solitary confinement, and privation of food; hence, also, disease, insanity, and death. The establishments visited by M. Nacquart were not by any means regulated by so severe a system.

M. Rochoux observed that solitary confinement led to insanity; in the United States the system has been abandoned for that cause. Solitude predisposed the mind to unwholesome excitement; in former days, hermits and ascetics became mad.

M. Londe contended that solitary confinement was an unjust and odious measure. The inspectors of prisons only defended the system because they were paid for it.

M. Nacquart answered to M. Rouchoux, that hermits of old were mad before ever they retired to the desert; a measure generally useful should not be set aside on account of accidental occurrences.

M. Baillarger thought the question of solitary confinement too important a one to be thus unexpectedly discussed in the academy without preparation; he hoped that another day would be appointed for the examination of this subject. The frequency of cases of insanity in penitentiaries did not appear to him so considerable an objection as it was generally thought, to solitary confinement. Since prisoners were carefully examined at the time of their first admission into penitentiaries, it has been ascertained that a great number of those whose madness had been attributed to cellular confinement, had been deranged before their entrance into prison, and sometimes even gave evident signs of insanity at the time of their admission. M Lécut's researches had shown that insanity was far more frequent in prisons, than amongst the free population: misery, reckless passions, and a vicious intellectual and moral organization, were the causes of this difference. He was, besides, with M. Nacquart, of opinion that, even if it was proved that in penitentiaries madness was a little more frequent, that would not be a sufficient reason to abandon solitary confinement, from which, in other respects, great advantages were obtained. The mortality of the central prisons and of the hulks was certainly greater than that of the free population, and still no one had presented this as an argument against these two forms of punishment.—*Med. Times, Jan.* 15, 1848.

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ADULTERATIONS OF DRUGS.

We published last week a Circular of the College of Pharmacy of New York, in which that learned body sets forth at great length the various and serious adulterations of drugs and chemicals imported into the United States from England.

The perusal of that circular has filled us with sad reflections. The allegations contained therein are of a kind to create serious alarms for the proper treatment of diseases even in this country, for it would be idle to fancy that drugs are adulterated exclusively for exportation to America, as some of our correspondents would seem to suppose; although, were the adulteration of drugs even exclusively confined to those intended for the foreign market, the case would be just as bad; and we must beg to differ *toto cælo* from one of our correspondents, who will have it that if the Americans insist upon a cheap article, they must rest satisfied with any vile compound the English drug-manufacturer may choose to send. We would remind our correspondent that in the matter of drugs, which may most probably become the arbiters of life and death, or which is, perhaps, of greater importance still, of health and disease, no mere £. s. d. argument will hold good to excuse those who obey the commands of the "market," instead of following the dictates of honor and conscience. We can hardly think without shuddering of the evils that this most pernicious system of adulterating drugs inflicts upon society; and we cannot and will not admit the spurious plea of necessity, in justification of those who pursue this system, no matter whether the adulterated drugs be intended for home consumption or the foreign market. We can very well understand that wholesale druggists may be exceedingly reluctant to refuse a large order, although the prices offered may happen to be even considerably below the cost of production of the genuine articles; and we are quite aware of the fact that a most mischievous system of unfair competition and underselling has of late obtained so largely in the drug trade, that many of the most respectable firms find it exceedingly difficult to maintain their ground against unscrupulous competitors. But surely no one will venture to assert that the adoption of a universal system of adulteration is the proper remedy for such a state of things! We imagine it would prove much more advantageous and profitable in the end, were all respectable firms to refuse positively supplying articles at a lower price than

they can justly and fairly be sold at if pure and genuine. Let the large body of honorable and respectable druggists, both wholesale and retail, unite to petition for the interference of Government to put a stop to the manufacture and sale of adulterated drugs and chemicals, and let the dealing in spurious articles in the meantime be exclusively left in the hands of the unscrupulous.

It is indeed time that a stop should be put to the adulteration of drugs, as the evils which spring from it are of incalculable magnitude. We find among others, in the circular above alluded to, the following remark :—"Is it wonderful that such enormous doses as we hear of, are taken, and indeed required, in the West; and that disappointment everywhere is experienced, by physicians, in the action of medicines?"

Indeed, it is by no means extraordinary that drugs such as are described in that circular, will refuse to answer the expectations both of physicians and patients. How many most excellent medicines have fallen into desuetude, because physicians found themselves disappointed in the result of their application, owing, of course, simply to the substitution, on the part of some dishonest manufacturer or dealer, of a spurious article for the genuine curative agent. Only a few weeks since, when the marvellous properties of chloroform were introduced to the attention of the profession and public, we had occasion to remark on the dishonest practice of some chemists to palm upon the public a spurious article, instead of chloroform. We happened at the time to meet two physicians, in rather extensive practice, who both expressed themselves greatly disappointed in their expectations of the new agent. Upon examining the "Chloroform" which they had used in their experiments, and which had been supplied to them by a house that styles itself "respectable," we found it to consist of simply impure chloric ether.

We may have occasion to return to this subject again.—*London Phar. Times and Jour. of Chem., Dec.* 18, '47.

Jury of Matrons.—The Jury of Matrons was recently revived in England by Mr. Baron Platt, at the Old Bailey, in the case of a female named Hunt, who pleaded pregnancy in bar of execution. The learned matrons followed the advice of the judge in using their "best skill;" and in about half an hour they came to the conclusion that the convict had not a living child within her. Mr. Baron Platt, apparently satisfied with the unanimous verdict of these ignorant women, ordered that the law should take its course. Subsequently, by an order from the Secretary of State, the prisoner was examined by professional men, and found to be pregnant. She was thereupon respited. The following paragraph from a recent number of the *Times* will show that the matrons were again in error, and that the medical opinion was correct :—

Mary Ann Hunt, who was sentenced to death for the murder of a woman named Stowell, and who was declared by a jury of matrons not to be *enciente*, was on Tuesday the 28th of December, delivered of a fine male seven months' child. The mother and infant are both doing well. It will be recollected th he sentence was some time since commuted to transportation for life.—*London Med. Gaz., Jan.* 1848.

Medical School of Galata Serail at Constantinople.—The *Gazette des Hôpitaux*, (August 26th, 1847), contains an interesting account of the visit of the Sultan, accompanied by all his ministers and high functionaries to this school, at the general examination and distribution of prizes, at the close of the ninth session,—a visit annually made,—and also the report of the first professor, Dr. Spitzer, to the Sultan on the state of the school. It appears from this report, that the number of students was 454; 409 were residents, (314 Mussulmen, and 95 Greeks, Armenians. Catholics and Israelites,) and 45 externes, who attend the school without lodging in it, but who enjoy, at the termination of their studies, the same advantages as the internes;—a place in the medical service of the empire is assured to them, and they obtain a grade from that of lieutenant to that of colonel, without distinction of religon.

Disinfecting Fluids.—The question of disinfecting the wards of fever hospitals by different metallic compounds which have of late been puffed into a most undeserved notoriety by parliamentary and other documents, has received a fearful solution in the death from fever, of one of the most active experimentalists—Colonel Calvert. This gentleman, who, unfortunately for himself, supposed that the poison of fever was as easily decomposed by a solution of nitrate of lead as sulphuretted hydrogen, and who had been officially sent to Canada, in company with Mr. Ledoyen, to test the efficacy of this liquid in destroying infection, has fallen a victim to his excess of zeal. M. Ledoyen has himself suffered from an attack of typhus, and is now, as we learn, from the *British American Journal*, on his way home to England. No report of the results of this mission is required: the fact that both of the Commissions were attacked with fever, and that one died from the effects of a febrile poison, which a rag dipped into a solution of nitrate of lead was utterly unable to destroy, is a sufficient proof of the futility of all such schemes. We hope that the fate of Colonel Calvert will serve as a warning to the patentees of other disinfecting fluids.—*London Med. Gaz., Jan.* 1847.

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Mortality among Physicians.—We have already noticed the great number of physicians who have fallen victims to the faithful discharge of their arduous and dangerous duties during the last year, and we are sorry to have to add, that death continues to make sad ravages in the ranks of our professional brethren. During the late epidemic fever in Ireland, it is stated that of twenty-seven physicians attached to fever hospitals and districts in the province of Ulster, attacked with fever in the discharge of their duties, fourteen, or more than one-half, died, leaving nine widows and thirty-seven children, for the most part but scantily or not at all provided for. These gentlemen have fallen a sacrifice to the faithful discharge of duties entrusted to them by the public, in the endeavor to restore health to the sick, and administer relief to the dying.

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Coffee as a disinfecting or anti-bromic agent.—By Frederic Weber.—Coffee is one of the most powerful means not only of rendering animal and vegetable effluvia innocuous, but of actually destroying them. A room, in which meat in an advanced degree of decomposition had been kept for some time, was instantly deprived of all smell on an open coffee-roaster being carried through it, containing a pound of coffee newly roasted. In another room exposed to the effluvium occasioned by the clearing out of a dung-pit, so that sulphuretted hydrogen and ammonia in great quantity could be chemically detected, the stench was completely removed within half a minute on the employment of three ounces of fresh-roasted coffee; whilst the other parts of the house were permanently cleared of the same smell by being simply traversed with the coffee-roaster, although the cleansing of the dung-pit lasted for several hours longer. Even the smell of musk and castoreum, which cannot be overpowered by any other substance, is completely dispelled by the fumes of coffee; and the same applies to the odors of assafœtida. It was remarked, however, that in general animal effluvia are more readily affected by it than vegetable.

That here an actual neutralization, and not a mere envelopment of matter, takes place, is shown from this—that the first fumes of the coffee are imperceptible, and continue so until a point of saturation, so to speak, is reached, whereupon the obnoxious smell disappears, and that of coffee predominates. The reverse happens with other aromatic vapors, and even with acetic acid and chlorine. Here both co-exist until the one completely preponderates.

The simplest form in which to use it against contagious matter is in powder. The well-dried raw bean is to be pounded in a mortar and to be strewed over a moderately-heated iron plate, until the powder assumes a dark-brown tint. Caffeic acid, and the empyreumatic coffee-oil, act more readily in very minute quantity.—*London Med. Gaz., Jan.* 1848.

Subsidence of the Cholera in Europe and Asia.—Intelligence has been received from St. Petersburg up to the date of the 29th January, (17th, O. S.) The following remarks on the subject of the cholera have been published by Dr. Thielmann, in the *Russian Medical Gazette.*

During the month of December the severe cold so completely arrested the progress of Asiatic cholera, that there was reason to believe it would disappear entirely. It has altogether ceased in the provinces around the Caspian; and with the exception of Moscow, Mohilew, and Witepsk, it is no longer met with in any of the great cities or towns of the empire. Even in these, and in smaller places, the disease has assumed so mild a character that it appears to be on the point of extinction.

Letters from Constantinople of the 1st January announce the gradual disappearance of cholera in that city. The epidemic was then chiefly confined to the Arsenal; and out of 210 attacked, only 58 died. Accounts from Bagdad of the 7th December state that the cholera had almost entirely disappeared from Kerkoula and Suleymania. Letters from Mossol, dated the 12th of December, mention that the cholera had ceased in that city, after having killed 300 persons; and intelligence from Aleppo of the 18th, states that it has appeared at Beregik, on the banks of the Euphrates, and was causing from ten to fifteen deaths daily.

On the whole, this intelligence is highly favorable.—*Lond. Med. Gaz.*

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Insanity not a result of the Separate System of Imprisonment.—From a report on the Pentonville Prison, it appears that in the first year, (1843,) of 332 convicts, the daily average in the prison, three became affected with insanity. In 1844, when the daily average was 456, no case occurred. There was one in each of the two following years, when the daily averages were respectively 445 and 423. In 1843, the cases were in the proportion of 9 03 per 1000. During the whole period (four years and a quarter) since the prison was opened, the proportion of cases to the daily average of prisoners has been that of 2.29 per 1000 annually. From the end of 1843 to the present time the annual proportion has been no more than 1.48 per 1000. If we compare the amount of mental disease in the army, where it can be accurately ascertained, we shall find that per 1000 it is nearly 1 among the dragoon guards in home service, 1.43 in the Ionian islands, 1.33 in Canada, and 1.41 in Gibraltar. The statement, therefore, that the separate system tends to produce insanity, has no foundation in fact.—*Lon. Med Gaz., March*, 1848.

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Resection of the head of the Femur.—This operation has been performed by M. Roux, at the Hôtel Dieu on a child fifteen years of age, laboring under spontaneous luxation of the femur on the iliac fossa, consecutive to coxalgia.—*Gaz. des Hóp.*, 25th Feb. 1847.

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Obituary Record.—Died, Jan. 29th, of typhus fever, caught in the discharge of his professional duties, Dr. Joseph Bell, one of the most distinguished medical practitioners of Edinburgh. Dr. Bell was the youngest son of the late Dr. Benjamin Bell, the Liston of his day, one of the most celebrated operators and practical surgeons that Scotland can boast of. His mother was a daughter of Professor Hamilton, who filled with distinction the Chair of Divinity in the University of Edinburg, so that by parentage, as well as by professional celebrity and personal labors, the name of Dr. Bell has long been intimately connected with the medical renown of the Scottish metropolis.

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Jan. 16th, at Baldock, aged 60, Robert Innerarity, Esq. Mr. I. had scratched one of his fingers, and afterwards dressed the arm of a patient affected with phlegmonous erysipelas. Shivering occurred the following afternoon, diffuse inflammation of the cellular texture supervened, and he died on the eighth day of the attack.

INDEX TO VOL. X.

Page.

A.

Abortion and Menstruation during Pregnancy, - - 139
Abortion and Sterility, Causes and Treatment of, - - 366
Abscess in the Axilla, - - 377
Academy of Medicine, New York, Delegates from, - 387
Aconitina, Poisoning by, - 285
Action of Medicines, - - 106
Alkaline Urine in Health, &c. 131
Amalgam, Dr. Trenor on, - 328
American Med. Association, 368
Anatomical Museum, Catalogue of, Boston, - - - 562
Annalist, New-York, - - 123
Antagonism between Typhoid Fevers, Intermittents and Phthisis, - - - - 130
Arsenic in the Serosity of a Blister, - - - - - 287
Asphyxia and Convulsions by the use of Chloroform, - 279
Atmospheric Electricity on the System, - - - - 267
Atropine in Painful Affections of the Face, - - - - 141
Auscultation in Labor, - - 137

B.

Beck, John B., on Acute Laryngitis, - - - - - 151
Beck, John B., on Blood-letting in the Young Subject, - 308
Benzoin, Remarks on Inhalation of, - - - - - 280
Bennett, H. N., on Epidemic Erysipelas, - - - 316
Biliphæin in Albuminous Fluids, 269
Births, Marriages & Deaths, 375
Bischoff, J. L. G., on Generation, by C. R. Gilman, &c., 231
Bisulphuret of Carbon in Sciatica, - - - - - 144
Blakiston, Peyton, on Diseases of the Chest, &c., - - 366
Blood and Urine, by Griffith, Reese and Markwick, - 367

Page.

Blistering Ointment Camphorated, - - - - - 140
Boardman, A., Defence of Phrenology, - - - - - 235
Bœneck, G. S., on the Hospital for Syphilitic Patients in Paris, 326
Bone, Nerves of, - - - 257
Bond, Thomas E., on Amalgam, 328
Bowditch, Henry J., Young Stethescopist, - - - - 365
Brain, Injury of with Chronic Abscess, - - - - - 217
Brain, Anatomy of, by Samuel Solly, - - - - - 345
Bromine on Hepatic Affections, 142
Brooklyn City Hospital, - 253
Bryan, James, on Epidemic Dysentery, - - - - - 49
Burrows, George, on Cerebral Circulation, &c., - - 345

C.

Cammann, G. P., Experiments on Capillaries of Lungs, - 27
Camphor, new Vehicle for Solution of, - - - - - 279
Camphorated Blistering Ointment, - - - - - 140
Caroline Lohman, *alias* Restell, Trial of, - - - - 92
Cary, J. Addison, Operation to Remedy a Division of Velum Palati, - - - - - 203
Carson, Joseph, Illustrations of Medical Botany - - 238
Case, A. B., Remarks on Strychnia, - - - - - 206
Catalogue, Medico-Botanical, of St. John's, Berkely Co., S. C. 104
Catalogue of Medicinal Plants of New-York, - - - 9
Cerebral Circulation, &c., - 345
Cerebral Inflammation, Treatment of, - - - - 409
Chloroform, 239, 246, 284, 279, 282, 283.
Chloroform, 369, 379, 409, 419, 420
Chemistry of the Four Seasons, 105

	Page.
Cholera, - - - - -	130
Cholera in Europe, Subsidence of,	426
Churchill, Fleetwood, Midwifery,	364
Clark, Charles C. P., on Injury of the Brain, - - -	217
Clitoris, Malignant Diseases of,	277
Coffee as a Disinfecting Agent	425
Cod Liver Oil in Struma, -	266
Cold Water in Fever, - -	271
College of Physicians and Surgeons of New-York, -	255
Convention, State Medical, Address of to the State Governments, - - - - -	111
Consumption, Curability of,	32
Croup, Nit. Silver in, - -	388

D

Datura Stramonium, an Emmenagogue, - - -	387
Davis, N. S., on the Philosophy of Medicine, &c., -	196
Davis, S. N, on Heterologous Tumors, - -	332
Diabetes, Turpentine in, -	410
Disinfecting Fluids, -	425
Drugs, Adulteration of, -	423
Dunglison, Robley, Practice of Medicine, - -	234
Dupierris, Martial, on Organiques Retrécisements, &c.,	361
Dysentery Endemic, at Lyons, N. B., - - -	204
Dyspeptic Headache, Treatment of, - - - -	132

E

Earle, Pliny, Description of Bloomingdale Asylum, &c.,	60
Electricity, Atmospheric, Effects on the System, -	267
Emigrants, Sickness and Mortality among, - -	392
Emigrants, Passengers' Act,	394
Enos, Dewitt C., on Puncture of Femoral Artery, -	53
Erysipelatous Fever, Epidemic,	316
Etherization, - - -	352
Etherization and Chloroform,	239
Etherization, Effects on Respiration, - - - -	131
Exostosés and their Treatment,	125

F

Faculty of Medicine of Paris,	422
False Joints, a New and Certain Method of Cure, -	261
Females and their Diseases,	224
Femoral Artery, Puncture of,	53
Femur, Resection of the Head of,	426
Fever, Typhus or Ship, Remarks on, - - - -	168
Fever, Typhus, pp. 264–267–271–282	
Fistula in Ano, - -	262
Foote, Trial of, - -	189
——, John, Opthalmic Memoranda, - - -	363
Forry, Samuel, on Hygiology,	289
Fountain, James, on Witch-Hazel, - - -	208
Fractures, Treatise on, -	235
——— of the Radius, -	258
Franklin Med. College, -	390

G.

Ganglionic Character of Arachnoid Membrane, - -	392
Gardner, Augustus Kingsley, on Disease Peculiar to Workmen in Brass - -	210
Generation, Tracts on, -	231
Geranium Maculatum, -	375
Gilman, C. R., - -	231
Griffiths, Thomas, Chemistry of Four Seasons, - -	105
Griffiths, William, on Blood and Urine, - - -	367
Gunn, Moses, Two Cases, with Remarks, - -	213

H.

Hæmoptysis, Remarkable Case of, - - -	270
Headache, Dyspeptic, -	132
Hernia, Cured by a Blow, -	57
Hemorrhage from the Umbilicus,	382
Hernia, Direct Inguinal, -	416
Heterologous Tumors, -	332
Hooping Cough, - -	327
Hospital, Brooklyn City, -	253
Howard, R. L., Surgical Cases,	177
Hydro-persulphate of Iron in the Treatment of Lead Affections,	142

I.

Influenza, Epidemic, &c., 400,	413
Insanity, Influence of Penitentiary System on the Production of, - - -	422
Insanity the Result of Solitary Confinement, - -	426
Iodide of Potassium, Physiological Action of - -	143
Iron, Hydro-persulphate of,	142

Page.
Iris, Hernia of, New Method of Reducing, - - 263

J.

Jackson, J. B. S. Anatomical Catalogue, - - - 362
Jarvis's Surgical Adjuster, Special Report on, - - 374
Jerks, - - - - - 372
Jury of Matrons, - - 424

L.

Labor, Auscultation in, - 137
Laryngitis, Acute, - - 151
Laryngitis, Nitrate of Silver in, 72
Lawton, A. G., on Malaria in the South-west, - - 74
Liver, Pathology of, - - 410
Lips, New Method of Restoring, 263
Liquid Adhesive Plaster, - 377
Lithotomy and Lithotrity, - 262
Lungs, their Uses, &c., - 360

M.

Macilwain, George, on Tumors, 87
Malaria, Sources and Influence of, 87
Malignant Diseases of the Clitoris, - - - - - 277
Marsh Miasmata, - - 370
Materia Medica and Therapeutics, - - - - - 234
McDowell, W. A., on Curability of Consumption, - - 32
Medical Plants of New York, 9
Medico-Botanical Catalogue, 104
Medical Botany, Illustrations of, 238
Medical Reporter of New Jersey, 237
Medical Profession in Ohio, 247
Medical Corps of U. S. Army, 251
Medical Society of Mississippi, 253
Medical School; Gala Serail at Constantinople, - - 424
Medical Associations, Reforms, &c., - - - - - 108
Medical Education, Munificent Contribution to, - - 381
Medical Society of the State of Georgia, - - - - - 123
Medical Society of the State of South Carolina, - - 383
Medicines, Action of, - - 106
Medical Society, Transactions of, 366
Medical Classes of 1847–8 - 382
Meigs, Charles D., on Females, 224
Meteorology and Physics, - 234
McClellan, George, Principles and Practice of Surgery, - 358

Page.
Midwifery, Statistics of, - 138
Midwifery, Works on, - 364
Mortality in Still-born Children, 138
Moral Faculty, Influence of Physical Causes on, - - 220
Muller, J., on Principles of Physics and Meteorology, - 234

N

Naptha in Consumption, - 409
Natural History, Lyceum of, Extracts from Minutes, - 338
Natural History, Curious Fact in, 422
Nevins, on the Beneficial Effects of Cold Water in Fever, 271
Nursing Sore Mouth, - 372

O

Obituary, Records, pp. 391–426–288
Obstetrical Tables, - 365
Olive Oil in Scabies, - 267
Opium in Inflammation, - 133
Opium, Muriate of, - 421
Optic Thalami, - - 257

P

Paine, Martyn, Materia Medica, 234
Pank, E. A., on Hooping Cough, 327
Parrish, Joseph, - - 237
Pathology of Typhus, - 267
———, Elements of, General, 364
Payne, Alban Smith, on Hernia, 57
Pennsylvania System of Prison Discipline, - - 226
Pennsylvania Med. Convention, 375
———— Hospital, - 390
Philosophy of Medicine, - 196
Phlegmasia Dolens, - 121
Physicians, Mortality among, 425
Placenta Previa, Treatment of, - - - 272–136
Pregnancy, Natural Term of, 418
Prolapsus Ani, New Method of Treating, - - 124
Puberty, Premature, - 418
Pulmonary Artery, Obstruction of from Renal Disease, - 269

R

Remuneration of Medical Men in Canada, - - 383
Report, Ninth Annual, of the Directors &c., of Ohio Lunatic Asylum, - - 236
Ricord, Ph., on Venereal Diseases, - - - 78
Rush, B., on the Moral Faculty, 220

Page.

S

Smith, Robert W., on Fractures, 235
Solly, Samuel, on the Brain, 345
Sprall, G., Obstetric Tables, 365
Statistics of New York Institution for the Blind, - 369
Stewart, James. on the Lungs, 360
Stillé, Alfred, Elements of General Pathology, - - 364
Stone, Lyman H., on Typhus Fever, - - - 168
Stramonium Ointment, - 122
Strychnine, Remarks on, - 206
Superfetation, Case of, - 254
Sydenham Society, - 374

T

Tendo-Achillis, Division of, 126
Tendons and Muscles, Injuries and Diseases of, - 127
Thirteenth Medical District of Indiana, - - 387
Transylvania University, Medical Department of, - 375
Tucker, David H., Midwifery, 364
Tumors, Nature and Treatment of, 87
—— of the Neck, Simulating Aneurism, - - 259

U

Unguentum Saponis Plumbæ, 122
University of the City of New York, - - - 254

Page.

University of Michigan, Medical Department of, - - 368
University of Louisville, Extension of Med. Session, - 387
Urine, Lead in, - - 287
—— in Typhoid Fever, - 414
Uterine Polypi, New Method of Applying Ligature to, - 416
Utero-Vesical Fistula, - 139
Uterus, Rupture of, before Labor, 277

V

Vagina Double, - - 253
Van Slyck, Dewitt C., on Endemic Dysentery, - 204
Varick, T. R., on Use of Nit. Sil. in Laryngitis, - - 72
Velum Palati, Division of, 203
Venereal Diseases, Practical Treatise on, - - 78
Vertebræ, from Cervical Luxation of, - - - 513
Vital Statistics, or Hygiology, 289

W

Webber, Dr., on the Effects of Medicines on the Mind, 323
Whitehead, James, on Abortion and Sterility, - - 366
Willard, Augustus, on the Diseases of Broome and Chenango Co., - - - 68
Witch-Hazel, Properties of, 208